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PROCEEDINGS

OF THE

DORSET NATURAL HISTORY

AND

ANTIQUARIAN FIELD CLUB.

EDITED BY

NELSON M. RICHARDSON, B.A., F.E.S.,

Hon. Secretary.

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CONTENTS.

	PAGE
Index to Plates and Engravings	iv.
Notice to Members	v.
List of Officers and Honorary Members	vi.
List of Members	viii.
List of New Members elected since the publication of Vol. XIV.	xviii.
The Proceedings of the Dorset Natural History and Antiquarian Field Club during the Season 1893-4, by Nelson M. Richardson, Esq., B.A., F.E.S.	xx.
Hon. Treasurer's Statement of Receipts and Expenditure from May 5th, 1893, to May 22nd, 1894	lix.
Hon. Secretary's Accounts to April 30th, 1894	lx.
Anniversary Address of the President, May 23rd, 1894	lxi.

An Old Hampshire Manor House on a Byeroad to History, by Frederic Fane, Esq.	1
Ellingham Church, by Frederic Fane, Esq.	13
On the Desirability of a Photographic Survey of the County, by Rev. T. Perkins	18
A Sketch of the History of Old Wardour Castle, by Rev. T. Perkins	26
Shaftesbury, by Rev. C. H. Mayo, M.A.	36
The Helstone on Ridge Hill, Portesham, by E. Cunnington, Esq.	52
Plush, by Rev. Canon Ravenhill, M.A., R.D.	55
Dorset Lepidoptera in 1892-3, with Description of the Larva of *Epischnia bankesiella*, Richardson, by Nelson M. Richardson, Esq., B.A., F.E.S.	59
Wareham: Its Origin and History, by E. Cunnington, Esq.	70
Some Additions to the Dorset Flora, by Rev. E. F. Linton	74
British Species of *Utricularia* (illustrated by Dorset specimens), by Rev. E. F. Linton	81
Reptiles of Dorset, by Rev. O. P. Cambridge, M.A., F.R.S., &c.	90
On New and Rare British Spiders found in 1893; with Rectification of Synonyms, by Rev. O. P. Cambridge, M.A., F.R.S., &c.	103
Dorset and King John; Notes on the Pipe Rolls (Dorset) of that Reign, Supplemented and Illustrated by References to the Patent and Close Rolls of the same Period, by Rev. W. Miles Barnes	117
Notes on a Minute Book (C. 12) belonging to the Mayor and Corporation of Dorchester (with a few passages from C. 9), by H. J. Moule, Esq., M.A.	142
The Ancient Free Chapel of Corton, by Rev. W. Miles Barnes	164
Some Local Stone Marks, by Thos. B. Groves, Esq., F.C.S.	167
Kimmeridge Shale, by J. C. Mansel-Pleydell, Esq., F.G.S., F.L.S.	172
On Some of the Rarer Trees in the Gardens of Abbotsbury Castle, by J. C. Mansel-Pleydell, Esq., F.G.S., F.L.S.	184
Report on Observations on the Appearances of Birds, Insects, &c., and the Flowering of Plants and Returns of Rainfall in Dorset during 1893, by Nelson M. Richardson, Esq., B.A., F.E.S.	195

PLATES, ENGRAVINGS, &c.

	PAGE
Miniature Effigy of Crusader in Mappowder Church	xxxix.
Old Wardour Castle—	
1. The Main Entrance	26
2. Entrance to Central Court	
3. Staircase to the Banqueting Hall	
Shaftesbury Seal "Sigillum Communitatis Burgi Shaston"	47
Dorset Lepidoptera, *Lita suædella*, *L. ocellatella*, *L. plantaginella*, with Larvæ and Food Plants	59
Utricularia neglecta	81
Natrix torquata; Ring Snake Variety	95
List of Dorset Reptiles	102
New and Rare Spiders	103
List of Spiders Recorded or Described in Accompanying Paper	115
List of Places in Dorset Visited by King John	119
Ancient Altar, Corton Chapel	164
Local Stone Marks	167
Lists of Local Stone Marks	168, 169
Kimmeridge Bay, Clavell's Tower, Coastguard Station	172
Sections in the Kimmeridge Clay from Gad Cliff (West) to Kimmeridge Bay (East)	172
List of Kimmeridge Shale Beds with Economic Value	174
Comparative Table of the Value of the Illuminating Matters contained in some of the Gas Coals and Cannels Usually Employed for Gas Manufacture in England	183
Table of First Appearances of Birds in Dorset in 1893	198
Table of Earliest Dorset Records of Plants in Flower in 1893	199
Table of First Appearances of Insects, &c., in Dorset in 1893	200
Table shewing Distribution of Rain over 36 Rainfall Stations	202
Table shewing Differences in the Records of Neighbouring Stations	202
Table shewing Distribution of Rainfall on July 15th, 1893	204
Tables shewing Distribution of Rainfall on Oct. 7th and Dec. 19th, 1893	205
Tables of Temperature at Winterbourne Steepleton and Parkstone for 1893	208
Table of Rainfall Returns for Dorset in 1893	210, 211

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Usherwood, Rev. Canon T. E.	Rossmore, Parkstone
Walker, Rev. S. A.	Spetisbury Rectory, Blandford
Ward, Rev. J. H.	Silverton Rectory, near Cullompton, Devon
Warne, C. H., Esq.	45, Brunswick Road, Brighton
Warre, Rev. F.	Bemerton, Wilts
Watkins, Rev. H. G.	Parkstone
Watson, Rev. William	County School, Dorchester
Watts, Rev. Canon R. R., R.D.	Stourpaine Rectory, Blandford
Watts, Colonel	34A, South Audley Street, London

Weaver, Rev. F. W.	Milton Vicarage, Evercreech, Somerset
Weld-Blundell, H., Esq.	Lulworth, Wareham
Werninck, Rev. Wynn	Walditch Vicarage, Bridport
West, Rev. G. H., D.D.	Ascham House, Bournemouth
White, Dr. Gregory	West Knoll, Bournemouth
Whitehead, C. S., Esq.	Sherborne
Whitting, Rev. W.	Stour Provost, Dorset
Williams, Rev. C.	Strangeways Prison, Manchester
Williams, Miss E. Blackstone	South Walks, Dorchester
Williams, Robert, Esq.	Bridehead, Dorchester
Williams, Mrs.	Bridehead, Dorchester
Williams, E. W., Esq.	Herringstone, Dorset
Wilton, E. H., Esq.	Antwerp Villa, Dorchester Road, Weymouth
Wilton, Dr. John Pleydell	Pulteney Buildings, Weymouth
Wix, Rev. J. Augustus	Ibberton Rectory, Blandford
Wordsworth, Rev. Canon	Tyneham Rectory, Wareham
Wright, H. E., Esq.	Southend House, Wickwar, Glo'ster
Wynne, Rev. G. H.	Whitchurch Vicarage, Blandford
Young, E. W., Esq.	Dorchester

The above list includes the New Members elected in 1894.

New Members Elected since the Publication of Vol. xiv.

March 15th, 1894, Dorchester Meeting.

Church, Colonel Arthur	St. Albans, Rodwell, Weymouth
Gillett, Richard Wm., Esq.	2, Gloucester Row, Weymouth
Hawkins, W., Esq.	Abbotsbury, Dorchester
Lewis, Rev. G. Bridges	4, Church Street, Broadstone, Wimborne
Lock, A. H., Esq.	Dorchester
McLean, Dr. Allan	St. Martin's, Weymouth
Payne, Miss Florence	Rydal, Wimborne
Pearce, Miss	Somerleigh Gate, Dorchester
Peto, Sir Henry, Bart.	Fleet House, near Weymouth
Ponting, Chas. E., Esq., F.S.A.	Lockeridge, Marlborough
Rixon, W. A., Esq.	The Manor House, Corfe Castle, Wareham
Snook, S. P., Esq.	20, Trinity Road, Weymouth
Williams, Miss E. Blackstone	South Walks, Dorchester
Wilton, E. H., Esq.	Antwerp Villa, Dorchester Road, Weymouth

June 21st, 1894, Bournemouth Meeting.

Barnes, Mrs. J. Iles	Summer Hayes, Blandford
Bassett, Rev. T.	Houghton Rectory, Blandford
Bodington, Rev. E. C.	Osmington Rectory, Dorchester
Butler, C. McArthur, Esq., M.S.A.	Salisbury Chambers, Boscombe, Bournemouth
Pike, Laurence, Esq.	Furzebrook, Corfe Castle, Wareham

July 18th, 1894, Wrackleford Meeting.

Burt, Miss Emma	Purbeck House, Swanage
Hudson, Dr. Horace	Sturminster Newton
Linklater, Rev. Robert	Holy Trinity Rectory, Stroud Green, London, N.
Watson, Rev. William	County School, Dorchester

August 15th, 1894, Bridehead Meeting.

Lonsdale, Rev. J. H.	Shroton Rectory, Blandford
Meade, Miss	Brunswick Buildings, Weymouth
Russell, Godfrey F., Esq.	Kinson House, Wimborne
Wordsworth, Rev. Canon	Tyneham Rectory, Wareham

September 6th, 1894, Ranston Meeting.

Coote, Rev. H. C.	St. John's, Weymouth
Hambro, Mrs.	Milton Abbey, Blandford
Hussey, Rev. J.	Pimperne Rectory, Blandford
Mansel-Pleydell, Mrs.	Whatcombe, Blandford
Rooper, T. G., Esq.	Pen Selwood, Bournemouth

December 10th, 1894, Dorchester Meeting.

Bonser, Geo., Esq.	Seaborough Court, Crewkerne
Evans, Rev. Canon	St. Alphege, Parkstone, Dorset
Stewart, James S., Esq	Deesa, Parkstone, Dorset

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Hawkins, W., Esq.	Abbotsbury, Dorchester
Lewis, Rev. G. Bridges	4, Church Street, Broadstone, Wimborne
Lock, A. H., Esq.	Dorchester
McLean, Dr. Allan	St. Martin's, Weymouth
Payne, Miss Florence	Rydal, Wimborne
Pearce, Miss	Somerleigh Gate, Dorchester
Peto, Sir Henry, Bart.	Fleet House, near Weymouth

M.S.A.	Salisbury Chambers, Boscombe, Bournemouth
Pike, Laurence, Esq.	Furzebrook, Corfe Castle, Wareham

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Rooper, T. G., Esq.	Pen Selwood, Bournemouth

The Proceedings

OF THE

Dorset Natural History and Antiquarian Field Club

DURING THE SEASON 1893–4.

By NELSON M. RICHARDSON, B.A., F.E.S.

The work of the Club during the season 1893-4 has comprised the annual business meeting at the County Museum, Dorchester, on Thursday, May 18th, 1893 ; a meeting in the neighbourhood of Ringwood, in the New Forest, on Tuesday, June 20th ; a two-days' meeting in the neighbourhood of Shaftesbury on Tuesday and Wednesday, July 11th and 12th ; a meeting at Abbotsbury on Wednesday, August 9th ; and one in Central Dorset on Wednesday, August 30th ; also two in-door meetings at the County Museum, Dorchester, on Friday, December 8th, 1893, and Thursday, March 15th, 1894.

Volume XIV. of the "Proceedings" was issued in the winter.

THE ANNUAL MEETING, which was held in the Museum on Thursday, May 18th, was attended by about 35 members, the President being in the chair.

ELECTION OF NEW MEMBERS.—Three new members were elected.

FINANCIAL REPORT OF THE TREASURER.—The Hon. Treasurer (Rev. O. P. Cambridge) read the following statement :—

"The financial statement I have to make to you to-day is in some respects less favourable than that of last year. Still, on the whole, there is not, I think, much reason for anxiety. We have published a volume during the past year, of just short of 300 pages, exceeding in length the volume of the preceding year by over 30 pages, and exceeding that of Vol. XI. (the longest before published) by about 40 pages. The plates of the past year's volume have also been many and well executed, costing our Field Club a heavy sum in spite of those plates that our excellent President paid for himself. In order to clear off our debts, therefore, and to keep within our probable income, we shall have to curtail Vol. XV. now in press and stint ourselves a little in the matter of illustrations. The arrears due to us are larger than last year (£66, as

against £53 10s.). Our receipts on account of subscriptions and arrears are, however, greater by about £5; but on account of sale of Proceedings we have only received £6 odd, as against £12 in the previous year. By my general statement you will see that if all our arrears and subscriptions for the present year were duly paid we should have an income for the year's expenses. This, with those subscriptions for the next year, usually received early in the year, would have given us ample for the defraying of the cost of a volume equal to any we have yet produced. As it is, I fear it is hopeless to expect all these arrears to come in, and so we must cut our coat a little more scanty to meet the diminished breadth of cloth. The influx of new members last year was considerable, but we also lost many by resignation and death. The total of members now on our list is 291, as against 277 last year." (Applause.)

The balance sheet showed that the receipts for the year ending May 5th, 1893, amounted to £149 15s. 7d. and the payments to £148 17s. 3d., leaving a balance in hand of 18s. 4d. Arrears due to the Club for the year 1892 amounted to £15, and for more than a year to £51, while the subscriptions still due for 1893 reached the sum of £113 10s. If these assets were taken into account and set off against the liabilities it would show a balance in favour of the Club of £143 3s. 7d.

PRESIDENT'S ADDRESS.—The President then delivered his anniversary address, which will be found following this article in Vol. XIV. of the Club's "Proceedings." After a graceful tribute to the memory of the late Mr. Thomas Bond, he proceeded to give a long and learned discourse on "The Genealogy of Plants during the Past Æons of the World's History," ending with an account of antiquarian discoveries at Rushmore, of the finding of some bones of a beaver (*Castor fiber*) near Blandford by Mr. Galpin, of certain geological discoveries by Mr. A. J. Jukes Browne, of the Dover borings for coal and some of the fossil plants found in them, of the occurrence of five birds, believed to be Bustards, at Whatcombe, of the addition of six plants to the Dorset Flora, and of the occurrence of several rare birds in Dorset.

General Tennant proposed and Rev. Canon Ravenhill seconded a vote of thanks to the President for his able and interesting address, after which the Club adjourned for three-quarters of an hour for luncheon, it being about two o'clock.

REPORT OF THE CURATOR OF THE MUSEUM.—After luncheon Mr. H. J. Moule read the following account of the progress of the Museum collections :—

"In beginning a report on the Dorset Museum for the last twelvemonth we will first take up the less essential sections of the institution, finishing

with that of most importance. Of course, in this last clause, I mean specimens of any kind belonging to Dorset. In the library we have some few valuable additions to record. In the forefront must be mentioned the third volume of General Pitt-Rivers' Excavations, a gift from the author. This volume treats partly of Bokerley Dyke, proving once for all, after endless conjectural discussions, that at least a portion of it is not earlier than the close of the Roman domination here. In short, the General's researches supply a new point in support of the opinion of Dr. Guest and others—that that part of Dorset was the scene of the great overthrow of the Teutons at the hands of the Romano-Britons, duce Arturo. Nay, it is lawful to think that Arthur may have been 'at the biggin o't.' Another valuable acquisition, also partly bearing on Dorset antiquities, is Stukeley's Itinerarium Curiosum. Our want of this book was much felt, but is now supplied through the kindness of Dr. Smart. He has also presented some interesting MS. memoranda of ancient graves found on Portland in 1851. Mr. Whitaker has given a copy of an important paper by Professor Prestwich on the raised beaches of Portland and other places. We have received from Mr. Hansford and Mr. Stone 28 volumes of local newspapers of the early part of this century, including several of the *Dorset County Chronicle*, not before in our series. Again, to close the library gifts connected with Dorset, our Club has presented Vol. XIV. of the 'Proceedings;' and the Rev. W. M. Barnes has given us a transcript by himself of many passages in the Pipe Rolls, relating to the county. The Rev. H. C. Reichardt has given a parchment roll of the book of Esther, in Hebrew, and has lent a most interesting MS. Virgil, of the twelfth or thirteenth century. Lastly, but unwillingly passing over other books received, I have the great pleasure of recording a new gift from our former benefactor, Mr. T. D. Galpin. He has given five valuable books, including the 'The Carrier of Columbus,' a most interesting work, and 'Our Own Country,' in six volumes. We now hasten to notice the Museum itself. In the non-Dorset department the President presented a specimen of a New Zealand caterpillar, *Hepialus virescens*, killed (as is not infrequently the case with this species) by a fungus several inches long (*Sphæria Robertiana*), which grows out of its body. The executors of the late Colonel Hambro have lately sent several Thibetan curiosities, including two Buddhist cylinders, or praying machines. These things were only recently discovered to be noted by the Colonel as intended for the Museum. The Rev. J. G. Barnsdale has presented a 'Samian' patera from Whitstable. In the course of the year several loans have been placed in the Museum, particularly some fine French and Japanese works of

art, belonging to Mr. K. Cornish and Mr. Knapp. And, quite recently, we have had for a short time the first muster roll of the Dorset Regiment of Yeomanry, and two maps relating to preparations for the expected defence of the county in 1794, all lent by Mr. Fetherstonhaugh Frampton. We are brought by this loan to the Dorset department of the Museum, in which we have had another also—namely, that of a small bronze bull found near Bridport by Mr. Ralls, and lent by him through the good offices of Mr. W. B. Stone. We now come to gifts to the Dorset Museum proper. In the natural history department there are few acquisitions to record, but some of them are very good. The Rev. Sir T. H. B. Baker has presented several valuable specimens of fossil wood from Portland, especially an extremely fine root-end of a tree. Mr. White at the same time gave a choice polished specimen of silicified *Isastræa oblonga*. This, strangely enough, was found to be part and parcel of a specimen in the Damon collection. The two portions are now cemented together. We have received an inconspicuous, but rare, fossil foraminifer, *Webbina irregularis*, adhering to a *Gryphæa dilatata*, from the Jordan Hill Oxford Clay. This specimen was found and given by a total stranger, Mr. Formby, of Bath, who was on a passing visit at Weymouth. The President has presented a rare fossil fish, *Pholidophorus brevis* ; and Mr. Fetherstonhaugh Frampton and the Hon. Ivan Campbell good specimens of Lignite. The Council have bought, through the interest of Mr. Andrews, of Swanage, a very fine fossil fish, *Lepidotus minor*. But probably the most interesting addition to the collections of fossils or quasi fossils consists of the jaw and other bones of a beaver found in a cavity in the chalk close to the Stour, near Blandford. These were presented by our friend, Mr. Galpin. The Dorset Natural History recent collections have been enriched by the gifts of a Solitary Snipe (*Scolopax major*) from Mr. Crane and a 9¼lb. trout from Major Clapcott. We come now to notice Dorset antiquities lately given. Let me say, as I fear that I always have to say on these occasions, that the list of such gifts is vastly shorter than it should be, considering the claims of the County Museum to be the home of county finds. But, on the other hand, our twelvemonth's acquisitions, if few, include some very good things. Taking these roughly in order of their reception, I first record a flint-scraper from Buzbury given by Mr. Hogg. At first sight it looks like an ordinary hollow scraper. But, in fact, it is a curiosity, from its hollow edge being ground. A smooth flint, on which it seems to fit, was found near it. Just possibly it may have been used for grinding by the help of sand. Another worked flint—viz.,

a capital barbed arrowhead from near Wool—was presented by the Rev. J. Bond. The Rev. G. W. Butler sent us a rude stone basin from Broadmayne and Mr. J. Durden, of Blandford, another from an unspecified Dorset locality. Both probably are corn-mortars. Next comes a group of relics of apparently Roman date found in Mr. Paine's garden at Wareham House, Fordington. They are partly given by him, partly lent by Mr. Montagu Guest, and all found through the zeal of my helper, Mr. H. Voss, in my absence from home. There are four beads, two pairs of ear-rings of thin silver wire, and remains of a comb much like one found by General Pitt-Rivers near Rushmore. But the most curious thing is a little fragment of the base of a pot of some kind of 'Upchurch' ware. It has on it two eyelets which, close to the base, form a very uncommon feature. Perhaps the vessel was a lamp and the eyelets were to carry wires for suspension. A sediment in the vessel may be the remains of oil. In the early part of the twelvemonth Mr. Pearce Edgcumbe presented more than a hundred Roman coins, a bronze unguent spoon, and other things found in his garden at Somerleigh Court. But he has added to this gift several articles, from an 18th century foil to Roman coins, just found in three graves close to Maumbury Rings. The most noteworthy is an 'Upchurch' cup of uncommon type. It is straight-sided, about three inches each way, and has two handles. In its rare shape and perfect preservation this little vessel is a most valuable acquisition. This is as good a general selection as I can achieve, looking through the twelvemonth's gains. Many interesting things are, however, omitted, such as most extraordinary seed vessels of *Martynia proboscidea*, given by Mr. Fetherstonhaugh Frampton. Still, I have registered enough to show that in the Dorset Museum we are not standing still. Yet I must repeat that the Museum seems to be too often overlooked when antiquities are unearthed in the county. I need not go into a report of the work done in the Museum. My task at the present moment is the pressing one of spreading out the crowded collection of Dorset birds. This has lately been made possible by the purchase of a new wall case. Museum work does not diminish. But this is said in no tone of complaint. With the growth of work my interest in it grows too, not in an equal, but in a much greater degree."

Election of Officers.—The three officers of the Club were unanimously re-elected, Mr. Mansel Pleydell being proposed by Canon Ravenhill and seconded by Mr. Phillips. The President, in acknowledging his re-election, spoke of the progress made by the Club in the last few years and alluded to the fact that the "Proceedings" of the Club were appreciated not only in the county, but in the scientific world. Dorset

afforded a splendid field for scientific research and much that was interesting to the geologist.

The Rev. O. P. Cambridge was re-elected Hon. Treasurer on the motion of Mr. Cunnington, seconded by Mr. G. Mayo, and Mr. N. M. Richardson Hon. Secretary on the motion of Mr. Phillips, seconded by Mr. Moule. Mr. Richardson, in replying, thanked his antiquarian and other friends who had helped him in various ways in connection with the meetings, and hoped that they would continue to give him their aid during the coming season.

Programme for the Summer Meetings.—The following meetings were proposed, the first four being accepted :—

(1.) Ringwood, including an invitation to tea at Moyles Court from Mr. F. Fane (23 votes). (2.) Shaftesbury, a two days' meeting (23 votes). (3.) Central Dorset, including an invitation to tea from Col. and Mrs. Bingham, at Bingham's Melcombe (17 votes). (4.) Abbotsbury (14 votes). (5.) Melbury. (6.) Toller Fratrum. (7.) Salisbury.

Exhibition of Objects of Interest.—These included (1) a photograph of a British camp in Rushmore, which was being excavated by Gen. Pitt Rivers, shown by the President ; (2) a bronze hatchet found by the President at Milborne St. Andrew ; (3) some bones of a beaver found by Mr. Galpin near Tarrant Keynston on the banks of the Stour, including jawbones, four vertebræ, some limb bones, and four ribs ; (4) a portion of the base of a pottery vessel found at Wareham House, Dorchester, with eyelet holes for suspension placed unusually low down near the bottom ; (5) a Cranborne trade token bearing the inscription of Henry Castell, 1666 ; (6) a duckbill (*Ornithorhynchus paradoxus*) presented to the Museum by Mr. W. G. Boswell Stone ; (7) a seed vessel of *Martynia proboscidea* presented by Mr. R. P. Fetherstonhaugh Frampton ; and (8) a fine specimen of the Camberwell Beauty (*Vanessa Antiopa*) caught at Blandford, shown by Mrs. Forrester.

Paper Read.—A paper, "On Local Stone Markings," which was read by Mr. T. B. Groves and illustrated on the blackboard, will be found given at length in the present volume. This terminated the meeting.

Moyles Court, Ringwood, Meeting.—The first summer meeting of 1893 was held under favourable auspices as to weather, &c., on Tuesday, June 20th. Meeting at Ringwood Station at 10.11 a.m., the party, which numbered about 100, drove through beautiful parts of the Forest by Picket Post and Bratley wood to Broomy Lodge, where they dismounted and walked some distance to Sloden enclosure, where were situated some ancient Roman potteries. What now remained of these

consisted of several small black-looking mounds, which, on being opened with the spade, were seen to consist of large quantities of broken pieces of black pottery, some showing considerable artistic shape and ornamentation. Mr. Fane spoke on the subject as follows :—

"It is very unfortunate that we have no one here to-day who is able to give any assistance in finding any of the objects of interest which lie all about us. The barrows and Romano-British kilns which exist in many parts of the Forest were examined in many cases about forty years ago by the Rev. J. Pemberton Bartlett, and as far as I can make out, by Mr. Wise, who has made an exhaustive monograph on the Forest, about ten years later, or thirty odd years ago.

Unfortunately, since then the character of the ground surface has greatly changed, and many of the spots of interest have been taken in to the Crown enclosure. Trees, branches, and thorns have grown up to hide all previous excavations, and even the persons who then assisted in these excavations have now lost all knowledge of their whereabouts.

Mr. Wise opened many of the barrows and shows that these were universally of the most ancient Celtic character, containing a few rough cinerary urns, with no traces of body burial, the urns being so decayed as to be in scarcely any case brought out whole. With the exception of a solitary stonehammer, some doubtful slinging pebbles, and flakes of flint, no tools were found—no iron, bronze, or bonework of any sort, no teeth, bones, or horn cores of animals occur, as they so often do in Celtic barrows. The mounds which contained mortuary urns are, as a rule, more elevated than the others. The primitive rudeness of these burials all point to a people whose living was gained rather by hunting than by commerce or agriculture.

The Romano-British Potteries exist in various parts of the Forest, but mostly in very inaccessible spots. They are all of the same character, and the mounds contain vast quantities of broken pottery and clay ready for using. The only clue to their dates are coins of Victorinus and Claudius Gothicus, A.D. 268, of which 1,700 were found in one of the thumb pots."

Mr. Fane called the attention of the party to the abundance of nettles over the pottery mounds, and said that it was stated by Mr. Wise that nettles and chickweed grew on the sites of any ancient buildings in the Forest. Mr. E. Cunnington said that the pottery there was not equal to some found in the New Forest at Crockhill, nearer to Fordingbridge, where there was a large pottery for many years, pieces from which were marked with flutings made for grasping with the fingers. The black Roman ware was made by the same method as a piece of his own manufacture, viz., by stifle-burning by fires of couch or other vegetable

matter, which gave the black colour. The pottery varied considerably in appearance in different parts of the country, according to the clay which happened to be used and the mixtures which were made. Some of the fragments in the present pottery mounds were of vessels which would hold one or two gallons. Of finer pottery there was of course the Samian, made at Samos ; but the Romans imitated it and made it all over their dominions. Mr. Cunnington exhibited an excellent specimen which was found at Bath, and observed that all Samian ware was imported.

After luncheon, which was eaten amongst the pottery-mounds, the party returned to the breaks and drove to Moyles Court, where a paper was read by Mr. Fane "On Moyles Court," chiefly dealing with the sad and romantic history of Alice Lisle. This paper will be found in the present volume. The President, having expressed the thanks of the Club to Mr. and Mrs. Fane, tea was partaken of at their kind invitation, and the house, which contained many objects of interest, oak carvings, tapestry, &c., inspected. At 4.15 the party drove to Ellingham Church, about a mile distant, the burial place of Alice Lisle, where a short paper was read by Mr. Fane, which will be found at length in this volume ; thence, at 4.45, to Somerley, where Lord Normanton had kindly allowed the Club to see his fine collection of pictures. Having spent some time in examining these and the many articles of virtu, as well as some of the contents of the library, the party left to catch the 6.34 down train at Ringwood.

New Members.—Eight were elected at this meeting.

Shaftesbury Meeting (Two Days).—A meeting was held at Shaftesbury on Tuesday, July 11th, 1893, and on July 12th in the neighbourhood.

The Hon. Sec. was assisted in the arrangement by the Revs. T. Perkins and R. Thurlow, who acted as a local committee at Shaftesbury. About 35 members met on July 11th, at midday, at Semley Station and drove to Shaftesbury, about 2½ miles distant, which is situated on the top of a hill, more than 700ft. above the sea level, and commands very extensive views of the surrounding country. At 3 p.m. a meeting was held in the Town Hall, the President being in the chair. Amongst numerous articles of municipal and local interest exhibited by the Mayor and Corporation and others were the following :—The Charter of Incorporation of the borough granted by Charles II. in 1666, a lease (lent by Lord Arundell of Wardour) dated Feb. 5th, 1538, from Elizabeth Zouche, Abbess of Shaftesbury, to Sir Thomas Arundell with the large seal of the Abbey appended, the two borough maces of silver, one dating

back to 14 Edward IV., the other having the date 1604 inscribed, together with the Royal Arms and initials of James I. This is also the date of the original Charter of Incorporation, which was replaced by the one mentioned above. The Communion plate of Holy Trinity Church, dated 1670, was lent by Rev. F. Ehlvers, the Rector. On the chalice is engraved "This chalice belongeth to the Holy Trinity of Shaston, 1670." A pewter flagon from St. Peter's Church dated 1770 was also exhibited, as well as many other relics of the past history of the town.

After the election of new members it was decided that Mr. Morton Stuart be asked to again represent the Club at the British Association meeting at Nottingham, but that should he be unable to do so Mr. Hansford be elected its representative. A paper was then read by Rev. C. Mayo "On Shaftesbury," which will be found in the present volume, together with an illustration of the ancient seal of Shaftesbury.

After a few remarks by the Mayor upon the maces, and from Mr. Powell on the growing perception of the public of the advantages of Shaftesbury as a health and pleasure resort, the party adjourned to the next room, where arrangements had been made for tea.

The Rev. F. Ehlvers then acted as cicerone in a walk to the chief points of antiquarian interest in the town, beginning at St. Peter's Church, an ancient building. Over the door are seen amongst other armorial bearings the Arms of the See of Winchester, a sword between two keys, and inside is a brass plate supposed to have been brought from the Abbey, with an inscription to Stephen Payne, Esq., seneschal to the Abbey, who died Dec. 4th, 1508. On Gold Hill, close by, the party were detained a short time by a heavy storm of rain and had the opportunity of inspecting a portion of the old wall of the town (or perhaps of the Abbey) of massive construction, with large buttresses. A blocked-up door in the wall is supposed to lead into an underground passage, and some time before a bricked-in passage had been discovered under the Abbey House near, but does not appear to have been investigated. Mr. Ehlvers next led the way to some gardens where were the ruins of the Abbey, of which very little remains, and pointed out where a tesselated pavement was discovered. It was hoped that further excavations might be made. The remains of Edward the Martyr and Edward the Confessor were interred at Shaftesbury; and the names of Gold Hill and Copper Hill were derived from the old mints granted to Shaftesbury by Athelstan. The party also inspected the modern church of Holy Trinity and the house of Miss Franks, which contained many things of interest; amongst others a stone cross with representations of the Crucifixion and Nativity inserted in it. About 60 members of the Club and visitors sat down to dinner at the

Grosvenor Arms at 7.0 p.m., when, after the usual loyal toast and the healths of the Mayor and the President, the curfew bell, which is still nightly rung at Shaftesbury, sounded at 8 o'clock, and a move was made to the Town Hall, where an evening meeting was to be held.

A paper was read by Rev. T. Perkins "On the desirability of a Photographic Survey of the County," which will be found in this volume. Considerable discussion ensued, in which the President, Secretary, Rev. F. Weaver, Mr. T. A. Colfox, and others took part, and it was finally decided to appoint a committee, consisting of Rev. W. Perkins (who was afterwards elected Director of the committee), Captain Acland, Mr. C. C. H. D'Acth, Rev. W. Miles Barnes, Mr. T. A. Colfox, and the Hon. Secretary *ex-officio*. Details were to be settled by the committee, but the outline was that members of the Club and others ready to help should photograph all subjects of a suitable nature within their allotted portion of the county, which was to be divided up according to convenience of working, and that these photographs should be mounted in albums and kept at the Dorset County Museum. The meeting broke up at about 10 p.m.

SECOND DAY.—On the morning of Wednesday, July 12th, the number taking part in the meeting was increased to about 85, including 15 of the inhabitants of Shaftesbury, who were invited by the Club to take part in the excursion. Leaving the Grosvenor Arms at about 10 a.m., the party drove through pretty wooded scenery to old Wardour Castle, a well preserved ruin, where a paper was read by Rev. T. Perkins "On Old Wardour," which will be found, illustrated by three views of the old castle, in this volume. After an inspection of the ruins, in which the large banqueting hall was a striking feature, the party made their way to the new castle, the residence of Lord Arundell, who courteously conducted the Club through some of the rooms containing family portraits and other pictures by Rubens, Vandyke, Sir Joshua Reynolds, Sir Thomas Lawrence, &c., and provided refreshments for them. An ironwood tree growing near the ruins was a source of much interest. It was of very large size and split up almost from the base into numerous trunks. It had been brought from S. America, and certainly flourished well in its adopted soil.

Whilst at the new castle the party were admitted in detachments into the adjoining chapel, erected in 1776 after a design by Quarenghi, a Venetian. The altar is composed of agate, alabaster, and rare marbles; the sarcophagus of verd-antique. In the vestry are several beautiful vestments richly embroidered. The altar piece is by Guisepe Cadiz, an eminent Spanish artist of the last century, and there are several other good paintings.

A drive of 4½ miles through Tisbury brought the party to Fonthill House, belonging to Mr. A. Morrison, who, though away from home, had most kindly allowed the Club to see the whole of his house and its contents, among which were specially noticeable some large vases, 4ft. or more high, of very fine cloisonné work, and other vases and ornaments of a similar elaborate and costly character. One long room contained a number of large tables, the tops of which were made of differently coloured agates, Labrador spar, malachite, and other beautiful stones ; also massive vases composed of similar materials. A heavy shower of rain overtook the party on their way back to the carriages. which had been left at the Beckford Arms, close to the entrance to the drive, but the trees in the park afforded excellent shelter.

Fonthill Abbey was next visited by kind permission of Sir Michael Shaw Stewart, Bart., whose son, Mr. W. Shaw Stewart, led the way to the old oratory and read the following paper on Fonthill, with some account of Mr. Beckford's tower-building and other schemes :—

" The Manor of Fonthill, so called probably from the abundant springs that gush from the sides of its hills, derived its additional name of Gifford from the ancient family of that name, who held it with fourteen other manors in Wilts shortly after the Norman Conquest. 'Fontel' is described in Domesday Book as part of the possessions of Berenger Gifford, in whose family it continued until King John's time, when Robert Gifford sold it to Sir Robert Manduit, Knt. In the reign of Edward III. his descendant, John Mauduit, obtained a charter from the king of free warren in all his lands at 'Funtell' and other manors in Wilts.

The family of the Lords Moleyns were the next possessors and were succeeded by Sir Robert Hungerford, whose attainder in 1461 caused the whole of his estates to be seized by the Crown. They were then granted to Lord Wenlock, slain in rebellion at Tewkesbury, and as he left no issue the estate again reverted to the Crown. The Mervyns next held the manor, and it remained in their family until 1631, the year of the attainder of Mervyn Lord Audley, when it again became forfeited to the Crown. It was then granted to Sir Francis, afterwards Lord Cottington, a distinguished Courtier and Minister of James I. and Charles I. His son, Sir Thomas Cottington, who appears to have offended Parliament by assisting the Earl of Marlborough in his attempts to relieve Wardour Castle, had the whole of his estates confiscated, and Fonthill was given to President Bradshaw, upon whose death Lord Cottington returned to his house with a large party of friends and followers, and, driving out Bradshaw's heir, maintained himself against

any further attacks until the restoration, which confirmed him in quiet possession. It continued with his family during the succeeding reigns, and until sold to Alderman Beckford, about the middle of the last century, and it is now that the modern history of Fonthill interests us. The earliest account of a family house at Fonthill is derived from an old painting dated 1566, which represents an important residence of the Elizabethan type, enclosed within walls and approached by a turreted gatehouse. This was probably built or greatly enlarged during the long occupation of the Mervyn family. Another house followed, built by Lord Cottington, and said to have been designed by Inigo Jones, who designed the archway leading into the park (and this archway still remains). This second house came into Alderman Beckford's possession with the Fonthill Estate, and, after he had largely improved and furnished it, it was burnt down in 1755.

The new house (one of the wings of which is now the centre of Mr. Morrison's house) was a handsome building with the centre and two wings, connected by corridors and splendidly furnished; the entrance hall measured 90ft. by 40ft., and it was reputed to be one of the finest houses in the West of England.

The Alderman died in 1770; his father, Peter Beckford, had been Speaker of the House of Assembly in Jamaica, and his grandfather, of the same name, Governor and Commander-in-Chief of that island. Alderman Beckford married the daughter and co-heiress of the Hon. George Hamilton, M.P. for the city of Wells, by whom he had an only son, William, the builder of Fonthill Abbey, a minor at the time of his father's death, and reported to be the richest Commoner of his day. He represented Wells in Parliament and afterwards sat for Hindon, and married Lady Margaret Gordon, only daughter of the 4th Earl of Aboyne. By her he had two daughters, one becoming Mrs. Ord and the other Duchess of Hamilton. He increased the Fonthill Estate by the addition of several thousand acres and soon began to rear a temporary building about a mile from the old house. This was the nucleus of the afterwards magnificent Fonthill Abbey, the whole of the old house, except the one pavilion or wing (already mentioned) being demolished, and a public sale held. What is said to have cost £250,000 was sold for £9,000! In 1796 Beckford, assisted by the architect, James Wyatt, began to erect on this spot the building known as the Abbey.

The ground plan was a cross of four limbs of nearly equal length, with an octagonal tower of nearly 300 feet in height at the intersection.

The doors at the entrance were 30 feet high, opening in to a vast Gothic hall leading by steps to the central octagon, a groined room, of

great height; this led to King Edward's Gallery, terminating in the oratory (in which we stand). On the other side were St. Michael's Gallery and the Yellow Danish Chamber, with many other rooms filled with rare books, rare Oriental china, and pictures of well known reputation.

The Abbey was evidently never intended as a permanent dwelling, timber and cement being the principal articles used in its construction, which was pushed on without a single delay, fresh bands of workmen relieving at night those who worked by day. The first tower, 300 feet high, was consequently overturned by a sudden storm, and Mr. Beckford is said to have regretted that he did not personally witness the crash. A new one was afterwards built and also fell some 20 years later. About this time, 1800, before the old house was demolished, Lord Nelson, having passed through Salisbury, where he received the freedom of the city at the hands of the Mayor and Corporation, was a guest, with other distinguished persons, of Mr. Beckford. Seven years later Mr. Beckford made the Abbey his residence and spent some 13 years in solitary splendour, seldom visiting the outside world. A wall, 12 feet high, topped by a chevaux-de-frise, surrounded the grounds, which contained walks and rides planned by himself and extending to twenty miles. Many attempts were made by strangers to obtain admittance to the grounds and gardens, but few were successful. Mr. Beckford sold the contents of the Abbey (probably owing to a depreciation in his West Indian property) in 1822, 7,200 catalogues at a guinea each being sold, Mr. John Farquhar, a retired East Indian merchant, paying £330,000 for the Abbey (as it stood) and land. Other sales of the library and china and pictures ensued, the last one continuing for 57 days.

On 21st Dec., 1825, the principal tower fell across Fountain Court, and destroyed the hall, the octagon, and the greater part of the galleries. This was not unexpected, Mr. Beckford having informed Mr. Farquhar of the vibration and insecurity of its foundations. Only one person was hurt.

The estate was again sold by auction and divided into two, Lord Westminster buying the site of the Abbey and woods and Mr. Morrison the remaining wing of the old house of Alderman Beckford, now the residence of Mr. Alfred Morrison.

Mr. Beckford died at Bath, where he built a high tower (150ft.), on Lansdown, in May, 1844, and is buried in the cemetery at Lansdown. Many of the family are buried at Fonthill Gifford, the church having been built by Lord Westminster in 1866 on the site of the old one erected by the late Alderman Beckford."

After hearing the paper, which was illustrated by an excellent model of the original Abbey, of which a small part only now remains, including one

of the lesser towers, which some of the party ascended, and after a pleasant walk through the woods surrounding the house (in which were many fine trees, including a small group of the deciduous cypress, three in number), down to the edge of a picturesque lake, the party once more joined the breaks and drove to Tisbury Church, where the chief architectural features were pointed out by the Vicar, Rev. F. Hutchinson, who also gave a short account of the church as follows :—

"The oldest part of the church, the north porch and tower arches, date from the 13th century. The first church, of which there are traces, had a nave with low arcading, and very low lean-to aisles, of which the south-west window still remains. Early in the 15th century the nave was raised, the aisles widened, and at a still later date probably Perpendicular windows were inserted and a clerestory added. The cuttings in the wall of the south aisle are believed to belong to the hammer beams of an older waggon roof. The beautiful ceiling of the south aisle has been restored, under Messrs. Slater and Carpenter. The north aisle, which has been partly destroyed by the fall of the spire, has this inscription—'In the year of our Lord 1560 this hele was set up,' Hele being Saxon for 'to cover,' hence *Hell*, *Hellier*, *roofer*, *&c.* The north transept was dedicated as a chapel to St. John Baptist, the patron saint of the church. Its floor was formerly raised, and a crypt was under it, with round holes in the wall, which have been preserved, for rolling down sculls into the ossuary. The crypt has been filled up, the floor lowered to the level of the church, and debased windows replaced by one of better style and an eastern arch leading into a new organ chamber, which with two vestries was added by Mr. Christian, as well as a new roof. The ancient tower too narrow for the present proportions, has a second stage added in the 14th century, and a superstructure 170 years ago. At the entrance to the chancel a second arch was added, in vain, to support the tower, and a larger chancel was built either at the end of the 15th century or possibly later. The Vicar hazarded the opinion that the grotesque quatrefoils in the side windows were of the 17th century, in which alone similar forms are to be found. The east window is said to have been built by Sir C. Wren, in place of a much larger one, the joints of which still remain. The roof is a new one copied by Mr. Evan Christian from the ancient one, which was decayed and hidden by a round ceiling of lath and plaster. The reredos is enriched by a bas-relief by Mr. Tinworth, representing the appearance of the risen Lord to Mary Magdalene, with the words 'Touch me not, &c.' The tomb is copied from drawings in Palestine by General Chesney. An interesting description was given by the Vicar of the whole design, including the stone which was in the

shape of a flat millstone rolling in a chiselled trough, explaining the words—'Who shall roll us away the stone,' 'for it was great.' Also he explained the mode of burial, the sealing, &c. This was also illustrated by a model exhibition at the Vicarage.

After visiting the church tea was provided in the church room, and some of the party visited the Vicarage to see sundry heirlooms and curiosities, including a first folio Shakespeare, title deeds, temp. Edw. III., &c. Cabinets and manuscripts of Mrs. Lucy Hutchinson, authoress of the memoirs, a silver gilt cup given by Queen Elizabeth to her cousin, Sir Francis Boteler, salvers and other plate belonging to James Brydges, Duke of Chandos, a court suit, temp. George II., a Prayer Book belonging to Fairfax, a portrait by Janet of Grey, Earl of Dorset, father of Lady Jane Grey, and others by Vandyke, Lely, Kneller, Romney, Lawrence, &c., a large china bowl with portraits of the Emperors of the Ming dynasty of China, 490 years old, and greatly desired by the Chinese Government, Punic tesseræ from Carthage, &c., &c."

The majority of those present left Tisbury by the 5.33 down train.

New Members.—Five were elected at this meeting.

Abbotsbury Meeting.—The third out-door meeting of the season was held in the neighbourhood of Abbotsbury on Wednesday, August 9th, 1893, the number present being about 80. Breaks started from Dorchester at 10.6 a.m. and drove through Upwey to Corton, where they were joined by the Weymouth contingent, who had driven *viâ* Chickerell and Langton Herring Cross. By the kind permission of Mrs. Mayo the little chapel of Corton was inspected, as well as the adjoining old house. The latter contained some old mullioned windows and four-centered arches, indicating a building of the 16th century. The little chapel, containing a pre-Reformation altar, was next visited and its history and description given in a paper by Rev. W. M. Barnes, who said that he proposed to raise a fund for repairing the edifice, so that it might be used for public worship. The paper will be found later on in this volume. The Rev. F. W. Weaver drew attention to what were apparently traces of frescoes on the walls.

Leaving Corton, the party drove down the valley, past West Waddon House, to Portesham Churchyard, where a paper, which is printed in this volume, was read by Mr. E. Cunnington "On Hell Stone." It had been intended to visit the stone, but time being short this was omitted from the programme. Mr. Cunnington exhibited in illustration of his paper some beautifully polished neolithic Celts from Brittany, also a large painted diagram of a section of one of the barrows on Mr. John Mayo's ground,

and read an account of the find. The barrow was 114 feet in diameter. There was a dolmen 3 feet under the original surface covered over with a cairn of very large rough stones, the top one weighing no less than a ton.

The party then entered Portisham Church, where Rev. W. M. Barnes pointed out the chief features of interest, stating that the church was originally a transition Norman structure. Of this building the north wall remained, with the original arches built up. One of them was pierced with a 15th century window. The outer arch of the porch was of the same date, and the font showed 13th century influence. Of 13th century work the priest's doorway was a good example, and the tower arch was of the same date. The window to the west of the priest's doorway with plate tracery might be late 13th or very early 14th century work. A window on the north side of the nave was markworthy. It showed that the movement which resulted on the Continent in the adoption of the style known as Flamboyant was not without its influence here, though here the transition from the 14th century Gothic resulted in the Perpendicular style. The Norman aisle was divided from the nave by the before-mentioned arches, and was in all probability taken down late in the 14th century, when that window was put in. In the 15th century the greater part of the church was rebuilt, the nave, the south aisle, the arches, the roofs, and other details being of this date. The rood-screen, with a loft over it, was also erected in the 15th century, but the loft was removed in the following century. The arrangement of hagioscopes on the north side was peculiar. It afforded evidence that there was an altar beneath the screen as well as an altar at the east end of the north aisle. The pulpit was Jacobean or Caroline. The parish register goes back to 1567.

On leaving the church the party drove to the Ilchester Arms, Abbotsbury, where luncheon was provided, after which an adjournment was made to the gardens belonging to Lord Ilchester, which he had kindly allowed the Club to visit. Here the President read a paper "On some of the Rarer Trees in the Gardens of Abbotsbury Castle," illustrating it by some of the trees and shrubs growing in the gardens, which contain a great variety of interesting forms from many parts of the globe. He showed how these recent forms were allied to those of which the remains were found fossil in the rocks and traced out their geological history, also dwelling upon their geographical distribution at different periods. His paper will be found later in the present volume. Lord E. Cecil, having expressed the thanks of the Club to the President, and acknowledgment having been made of Lord Ilchester's kindness, the party divided, the greater part ascending the hill to St. Catherine's Chapel. Here

Mr. Moule read again the paper which he had prepared on the chapel on the occasion of the last meeting of the Club at Abbotsbury, in 1886. This paper will be found in Vol. VIII. of the Club's "Proceedings." After Mr. Moule had read his paper and pointed out the beauties of the stone roof and other parts of the building the party walked down to the hotel, where tea was awaiting them. Those who were able to remain a little longer paid a short visit of inspection, under the guidance of Dr. Hawkins, to the church and ruins of the old Monastery, and the meeting finally broke up at about half-past six o'clock.

New Members.—Nine were elected at this meeting.

Central Dorset Meeting.—The fourth and last of the summer meetings of the Club was held in Central Dorset on Wednesday, August 30th, 1893, and comprised visits to Plush, Nettlecombe Tout, Mappowder, Hazelbury Bryan, and Bingham's Melcombe. The weather was all that could be desired, and the party numbered between 80 and 90. A start was made from Dorchester at 9.25 a.m., a break also leaving Blandford at 9.0 a.m. to convey the members from that neighbourhood. The rendezvous was fixed at Plush Church at 11.0 a.m., where the Rev. Canon Ravenhill read a paper "On the Parish Church of Hazelbury Bryan," which will be found in the present volume.

Leaving Plush, the party drove on to the Fox and Hounds Inn, whence they walked up the hill opposite and along a ridge, from which descended on the further side a splendidly-shaped combe like a huge amphitheatre. The highest point attained was 860 feet above the sea-level, and fine views could be seen for many miles. After a walk of some distance along the top of the hill, the earthwork, which was not of any striking dimensions, was reached, and Rev. Sir Talbot Baker read some notes on the subject. He said that when he was asked to prepare some remarks about the Tout he felt some diffidence about complying, because till then he had not even seen the hill, and even the best archæologists could say very little about those camps. For the most part there were no remains to afford a clue to those who constructed the camps; no coins, for example: Hutchins told them that no coin had ever been found on the Tout. Again, there were no inscriptions, and without inscriptions and coins dates could not be fixed. Celts and arrow heads and flint implements could only give them an idea of distant periods, and even bronze implements would tell them only of far distant dates. He thought, therefore, that he would rather speak of those who in all probability built those camps and give a kind of conjecture as to what the camps were built for. He supposed that there could be no doubt that

that was one of the camps of the Durotriges, the people who inhabited the hill country of ancient Dorset. The word "Durotriges" meant "dwellers by the sea." Cæsar told them that the Veneti, a Gallic tribe who occupied what they now called Brittany, were accustomed to navigate backwards and forwards between Britain and Gaul. Mr. Warne conjectured, and he believed that his opinion was sound, that the Durotriges were a branch of the Veneti who came over to Dorset. Sir Talbot proceeded minutely to define the boundaries of the territory supposed to have been occupied by the Durotriges in the littoral district between the mouths of the Hampshire Avon and the Axe in Devon. The camps of the Durotriges were some of the finest in England, but of course Maiden Castle was the queen of all these camps. In Dorset there were 24 or 28 of these camps, counting both *oppida* and *castra*, for he failed to perceive the distinction which Mr. Warne drew between them. Those were the Durotriges who inhabited Dorset when Vespasian came over. They were described as living on milk and flesh, and it might be supposed that they covered in the tops of their pits with wattled roofs and there passed their time. They worked the country down below their camps, but used these places in times of war as camps of refuge for their cattle, cattle being in those days the staple wealth, the "money" of the people, as indeed the Latin word for money signified, *pecunia* being derived from *pecus*, cattle. All that country round was then one vast, uninterrupted forest, of which traces still remained in the numerous trees visible in the surrounding landscape. There, probably, dwelt an earlier race than the Durotriges, about whom nothing was known save that they had no knowledge of metals whatever, and no coins such as the Durotriges had. They had long heads and little bodies, and were of a very low type of mankind. The long-headed men buried their dead in long barrows, and the round-headed Durotriges in round barrows. Possibly these long-headed men were conquered by the Durotriges and lived in the swamps below those camps, which were perhaps made in order to keep them down. When the Roman Conqueror came circumstances compelled him to subdue those of the Durotriges who would not submit to his yoke, and he occupied some of those camps. Although the Tout was not one of the first-class camps, yet it stood in a magnificent commanding position at the convergence of three ridges, with three combes between. On the other side, on a fine day, he believed one could see the Isle of Wight. He did not see any sign of where the occupants of the camp could have got water. General Pitt Rivers suggested that they used skins to bring water up from the marshy places below. Of course it should be borne in mind that the whole country was

much moister in those days before the bulk of the trees was cleared away. Sir Talbot deplored the fact that the rabbits were doing a great deal of havoc on the Tout. The rabbit was a useful little animal and cost nothing; but it was doing considerable damage there, and as an archæologist he was bound to "put his foot on it." Canon Ravenhill proceeded, after thanking Sir Talbot, to speak of the origin of the word "Tout," which he said some derived from "Tiw," the name of the old Celtic god, which was represented by the Greek Hermes and the Roman Mercury, or from the Tentonic god Tuisco. Tout meant any height of free and extensive observations and was used in this sense by Sir John Maundeville in his "Voyages and Travels." There exist near this spot the site of an ancient British village and a small Roman camp of observation, but it was not possible to bring these into the programme. Luncheon was partaken of in a field just below the Tout by permission of Mr. Cross, of Armswell Farm. Armswell—Armingeswell, Ermingeswell, or Hermingeswell—was formerly a manor in conjunction with Netherbroke, and belonged to the Abbey of Glastonbury. On the dissolution of the monasteries it was granted to Sir John Horsey, of Clifton Maybank, who had Melcombe as well as Armswell. Richard Arnold, who died in 1595, married Mary, his eldest daughter. From the Arnolds it passed to the Framptons, of Moreton. James Frampton sold it to Mr. Farquharson, of Langton, one of the principal founders of Plush Church. Monkwood is a little north-west of Armswell.

After luncheon the breaks were rejoined, and the party drove by Monkwood Hill to Mappowder Church, where they were received by the Rev. Alfred Roberts, the Rector. He said the church was dedicated to St. Peter and St. Paul; but it was restored twenty-five years ago, the chancel being entirely new. The lavacrum for holy water, preserved in the south-east side of the porch, proved that the church was of pre-Reformation date. Mr. Roberts pointed out that the arch of the tower was Norman, whereas the arches of the nave were Perpendicular. He said that the font was very handsome, square, of Purbeck marble, with pillars at each corner, and standing on a large stone column. There is a hagioscope in the south aisle, and there are a few steps leading to what was the rood loft. In this aisle is the tomb of the young Crusader. It is unknown who he was, whether a boy, or a full-grown Crusader, in a diminutive effigy, or how he was connected with Mappowder. In the old chancel were monuments to the Coker family, who for many generations owned the manor. The two large windows inserted on the north and south side of the new chancel left no space for these tablets, of great beauty and elaborate workmanship, which were removed to the

MINIATURE EFFIGY OF CRUSADER,
MAPPOWDER CHURCH.

lower walls of the tower. The stone top of the holy table was found in the churchyard at the restoration of the church. It has five crosses, typifying the number of wounds on our Blessed Lord's body. The curfew is rung during the winter months. Canon Ravenhill added the following remarks:—He said the church consisted of a nave, south aisle, tower with belfry, chancel, and a south porch with diagonal buttresses. The late Mr. Carpenter (who, with Mr. Slater, restored and partially rebuilt the church in 1868) had given him a copy of his interesting report on the church. He said that in July, 1866, John Legg, ætat. 80, told him that the chancel had been pulled down seventy years ago, that there had been a window on each side of the chancel of two long single lights; and that the east window was like these. Mr. Carpenter, he said, inferred that there was a 13th century chancel, with a more lately inserted east window. This chancel having been replaced by a building with no character whatever, the architects in 1868 rebuilt the new chancel in harmony with the nave and richly-panelled chancel arch. The arch was necessarily rebuilt and a flying buttress added to the north. The nave, aisle, tower, and porch much resemble the coeval work of Abbot Bradford, of Sherborne. The arcade, save the west respond, was rebuilt in 1868 stone by stone. The hagioscope was then re-opened and repaired. In the eastern respond is a richly-carved corbel (as at Yetminster) to carry the rood-loft beam. Some of the old oak seats still existed. They were repaired and re-used at the restoration. The north parapet of the nave was then reset, repaired, and the pinnacles replaced. Another tower parapet was also then treated. Portions of the ancient nave roof remained and were followed in the new design. The aisle roof was not ancient, but its old corbels existed and were used for the new trusses. The recess in the south aisle was repaired in 1868 and the effigy of the Crusader replaced on a new marble shelf. The west window of the aisle is of an early decorated date. We may infer that the original nave was of the 13th century with an aisle added to it. In 1868 the then existing roof was of a lower pitch than the water tabling on the tower; fifteen inches below it. The tower, therefore, had very probably been added to the then existing earlier nave. At the restoration a new roof was erected on the tower. Canon Ravenhill then spoke of the young Crusader. He said the figure was scarcely two feet long, dressed in complete mail, close round helmet, with shield and sword. The hands were elevated, holding the heart. The head rests on a cushion. A lion supports the feet. There are no arms or inscription. The right leg is crossed over the left. There is a similar figure in Tenbury Church, Worcestershire. Local

tradition says this figure is of some boy who accompanied his father to the Holy Land and died in the Crusade. The 3rd edition of Hutchins states that these little monuments were erected over the hearts of persons whose bodies were buried elsewhere. William de Albini, 3rd Lord of Belvoir and Uffington, near Stamford, who founded Newstead Priory, has his body buried at Newstead and his heart under the high altar at Belvoir, with this inscription :—

> "Hic jacet cor D'ni Willielmi Albiniaci,
> Cujus corpus sepelitur apud novum
> Locum juxta Stanfordam."

Canon Ravenhill mentioned that his attention had been drawn to the fact that the lion couchant at Mappowder betokened that the Crusader was with Cœur de Lion. With regard to the curfew he said the local tradition was that a lady once lost her way in the neighbourhood and was helped to find it by the curfew bell. Out of gratitude she left a small endowment to enable the ancient custom to be continued. Mr. H. J. Moule regretted the effigy of the Crusader had been so lamentably scraped at the restoration, so much so that all the old surface was gone. Rev. W. M. Barnes inferred from the armour that the date was about 1210 A.D.—very early in the 13th century.

The next stopping place was Hazelbury Bryan Church, where the Club was received by Rev. Canon Wheeler, who explained the architecture, &c., of the church and read some notes upon it, which will be found embodied in a paper read by Canon Ravenhill in the previous winter before the members of the Club, and published in Vol. XIV. of the "Proceedings" at page 95.

A drive of about five miles brought the Club to their last destination, Bingham's Melcombe, where they had been kindly invited to tea by Colonel and Mrs. Bingham. After tea, which was served on the old bowling green, Colonel Bingham read the following paper in the Court-yard :—

"This ancient mansion was formerly in the possession of the Turbervilles, but came into the Bingham family by the marriage of Robert, second son of Sir William de Bingham, of Sutton Bingham, Somersetshire, with the daughter and heiress of Robert Turberville, about the time of Henry III. or Edward I. The present house is supposed to have been built in the reign of Mary, daughter of Henry VIII., although some part of it must have been of an earlier date. The main entrance is through an ancient gatehouse, the windows of which, as well as those of the east portion, have been modernised. The courtyard consists of three sides; the kitchen and offices on the west side, the gatehouse on the south side, and

the main portion of the house on the north. The latter contains the hall and oriel in a terrace. The gable over the oriel bears the arms of the Binghams, and the vane at the top bears the date 1677. Entering the hall, the walls of which were panelled at one time with oak, but have been painted (but not by me), in the windows on the oriel to the south are the arms of Russell, Earl Bedford, those of England and France, the arms of Spain, and arms and quarterings of Herbert, Earl Pembroke. These are supposed to have been placed to commemorate the occasion on which Philip and Mary visited the mansion. In taking down some of the panelling in the oriel, which had decayed, two carved arches were found, one of which must have led up into the sleeping apartments. The other, having a door (as found), led down to the kitchen, as behind the door are a flight of steps. The corridor, which stands in the court-yard, is of recent building, as it takes in some of the same moulding as the gable of the oriel and other carving. In the hall are portraits of Charles I., Archbishop Laud, the Duke of Norfolk, Earl Stafford, Colonel and Mrs. Penruddock ; and among the family portraits are Sir R. Bingham, Mr. Pollinger, Colonel R. Bingham, Sir J. Bingham, K.C.B., by Pickersgill, Colonel R. H. Bingham, and others. All these portraits were in such a state that they were, some of them, almost blank, but they have lately been well restored. In the dining-room is an ancient carved chimney-piece, in which is inserted a picture of a rural fête, probably Dutch. In the present servants' hall, which was the brew-house, is a table taken out of one of the ships of the Spanish Armada, and presented to the family by an ancestor of the Honourable Mrs. Brassey, who was a Miss Bingham of the Clanmorris branch, and in the old servants' hall was an interesting carving, which is being made into a cupboard. It is the arms of Bingham and Coker, of Mappowder. There are also some carved panels in one of the bedrooms in the house. In the garden is an ancient bowling-green in perfect condition, the length of which is 72 yards, and also a very fine yew hedge, which is 12ft. thick, and is considered a very good specimen. There is likewise, in the garden, a very old garden settle, one of the few remaining in the country, and a dove-cot in the form of a round tower, which is considered unique. In the lower gardens there are some trees, which are considered to be the finest in the county, especially a silver fir, which is very tall and is 16ft. round at four feet from the ground. The house has lately undergone restoration, as some of the walls and the roof were unsafe ; but care has been taken that nothing should be modernised, so much so that the stone slabs of the roof, which had to be taken off, have been replaced, and everything kept

as much as possible in the former state. It may interest some people to hear that one wall in the kitchen is 8ft. thick, and that most of the walls, both inside and out, are on an average 3½ft. thick; also that some of the old oak was left to me by the late Charles Bingham, whom, I am sure, most of you have known, or heard of."

Colonel Bingham then conducted the party through the house and pointed out the chief objects of interest mentioned in his paper, including the portraits and some of the carved oak which had been rescued from the panelling, and also the table which was said to have come out of one of the ships of the Spanish Armada. Rev. Sir Talbot Baker, in the absence of the President, having offered the thanks of the Club to Colonel and Mrs. Bingham for their hospitality, and to the former for his interesting paper, the return drive of ten miles to Dorchester was commenced through Dewlish and Puddletown at 5.15. p.m.

No new members were elected at this meeting.

First Winter Meeting.—A meeting was held at noon on Friday, December 8th, 1893, in the Reading-room of the County Museum, Dorchester, with the President in the chair, about 35 members being present. As there had always been a little difficulty about the arrangements at these winter meetings, owing to the fact that the attendance in the afternoon was generally much smaller than in the morning, the Secretary invited suggestions as to any different plan. Several were made by various members, but it appeared that if the meetings were held earlier than noon it would be inconvenient for those who came from a distance, and that if they did not begin until noon a break for luncheon could not well be dispensed with. On the other hand if they were held entirely in the afternoon it would be inconvenient to many to be kept to a later hour than at present. The present arrangement, therefore, seemed to be on the whole as satisfactory as any other, and has been adhered to on the occasions of the other meeting of the Club in the present winter session and the annual meeting in May, 1894.

British Association.—Mr. Hansford, at the request of the Secretary, gave some account of the last meeting of the British Association, at which he had represented the Club. He had been requested to suggest to the Club that steps should be taken somewhat in the direction of what was proposed to be done by the Photographic Survey which had been instituted at the Shaftesbury meeting, which would however take some years to carry out to any extent. He had also been asked as to the existence of erratic blocks in Dorset. The President thereupon stated that Dorset not having been an ice county there were none.

General Business.—Mr. Moule remarked upon the inaccuracies of the new ordnance maps as regarded ancient earthworks. The Secretary stated that a Rainfall observer was much needed at Dorchester or near it, as though, being the county town, it ought to be the centre of science as well as everything else in Dorset, there were no rain gauges so far as he knew within some miles of it.

Mr. Bankes said that he understood that there existed a local Field Club at Poole and thought that it was a pity that it should not be amalgamated with the Dorset Field Club, and similarly that it would be better to have one Central Museum in the county, to which all objects of interest should be sent, rather than a local museum in each town. The Rev. Sir Talbot Baker said that there had existed a small Field Club at Weymouth which, he believed, was not carried on. Dr. Philpots stated that the Poole Natural History Society had been in existence for about six years, that the subscription was small and no Proceedings were published, and that he did not think that it clashed with the Dorset Field Club.

Mr. Bankes also drew attention to the occasional flooding of Charminster Church and the dampness of the churchyard, and asked for suggestions from the Club, which were not however forthcoming.

Exhibition of Objects of Interest.—The President exhibited a specimen of *Verbascum Chaixii* found at Abbotsbury in June last by Miss Hawkins and new to Dorset.

Mr. Cunnington exhibited two fossils—(i.) a specimen of *Terebella Lewesiensis*, which is according to Mr. William Davies, F.G.S. (Geol. Mag., Ap., 1879), the remains of membranous tubes of large soft-bodied annelides of solitary habits that collected and agglutinated, either for protection or disguise, the scales and the bones of fishes to the exterior surface of their tubes, which were sometimes 2ft. in length. Dr. Mantell in 1822 looked upon these as fishes, and the quarrymen call them "petrified eels." All that can be seen is an agglomeration of the scales, &c., of different fish which are now generally considered to have formed the cases of worms. This specimen is from the chalk near Dorchester. (ii.), a specimen of *Cliona cretacea*, a pretty and delicate sponge, from the flint quarries two miles south of Evershot.

The first paper by the President, "The Kimmeridge Shale in Its Economic Bearings" will be found, as well as the others read at this meeting, printed in full later on in this volume. This paper was illustrated by six large diagrams, illustrating the faults in the strata and their general arrrangement.

The second paper was by the Rev. W. Miles Barnes on "Dorset and King John, Notes on the Pipe Rolls of that Reign, supplemented and illustrated by References to the Patent and Close Rolls of John's Reign."

The third paper was by the Secretary, "Notes on Dorset Lepidoptera, 1892-3," at the end of which he mentioned the progress which had been made in the arrangement of the two insect cabinets of 20 drawers each lately purchased by the Museum, and expressed a hope that before long there would be something like a collection of *Lepidoptera* (butterflies and moths), and also other orders of insects to be seen in them.

A discussion ensued on the abundance of wasps which had been general in the past year, which had been alluded to in the paper. The Rev. O. P. Cambridge said that in some places they were not numerous, but at Bloxworth they were in abundance. About the beginning of September, however, the wasps suddenly disappeared, and when the apple-picking time came there was hardly a wasp about, though a week or ten days before they had had to fight with the wasps in order to gather a peach. Why they ceased so suddenly he could not tell, as the weather continued dry. The Rev. R. P. Murray said that at Shapwick the plague of wasps lasted until well into October; perhaps October 6th or 10th. The Rev. O. M. Ridley said that at Charminster wasps were very scarce, whereas a few miles away they swarmed.

At this point the Rev. Sir Talbot Baker took the chair, the President being obliged to leave the meeting.

The next paper, on "Wareham, its Origin, and History," read by Mr. E. Cunnington, called forth a good deal of discussion as to what evidence existed of the presence of the Romans in Wareham, Mr. Cunnington asserting that there was none. Sir Talbot Baker thought that traces of Roman origin existed there, independently of the finding of Roman remains, in the square form of the circumvallation and the position of the two principal streets, at right angles to each other. The Rev. O. P. Cambridge stated that he believed that little or no investigation for Roman or other remains had been made there by digging. Mr. Cunnington mentioned the absence of any building stone in the neighbourhood as a difficulty and did not consider that any conclusion could be drawn from the position of the streets, as Wareham had been destroyed by fire three or four times, and the modern streets might probably run quite differently from the original ones. This was often the case in towns, and in Dorchester, for instance, he believed that no one but himself knew where the Roman east gate was. It was not in Durngate-street, in the middle of which had been found the remains of a Roman villa. Mr. Moule suggested that as in the Roman town of

Dorchester Roman remains were being found every week it was strange that if Wareham was also a Roman town such remains should be so rare. In reply to Mr. Cunnington's remark that there was a tendency to call everything Roman Sir Talbot Baker said that before that everything was said to be Danish !

Two papers were then read by the Rev. E. Linton on "Some new Dorset species of plants" and "British species of *Utricularia*, illustrated by Dorset specimens." Before his departure the President stated that he had found one of the species of *Utricularia* in the river Stour and *Utricularia neglecta* in Morden Lake. The Rev. O. P. Cambridge welcomed the appearance of a botanical paper as they did not often appear in the Proceedings of the Club, and thanks having been given to the authors of the various papers the meeting terminated at about 4.30 p.m.

New Members.—Three were elected at this meeting.

Second Winter Meeting.—The second winter meeting was held rather later in the year than usual, on Thursday, March 15th, 1894, in the Reading-room of the County Museum, Dorchester, at noon. The chair was taken by the Rev. Sir Talbot Baker in the absence of the President, about 40 members being present.

New Members.—Fourteen were elected and Mr. A. Bankes remarked that he thought it was the largest number ever elected at one meeting, and showed a flourishing condition of the Club.

General Business.—The Treasurer laid on the table the report of the National Footpath Preservation Society to which the Club subscribed. He also mentioned a publication by E. A. and G. F. Fry entitled "Dorset Records" which would be of interest to antiquarians.

The Secretary read the following communication from Mr. C. W. Dale:—"On January 25th at 9.30 p.m. as I was on my way to the Sherborne Ball, about half way between the Leweston Cross and West Hill Gate, a brilliant meteor, looking like the full moon, suddenly came through the clouds and slowly came to ground in a field on the right hand side of the road, then burst asunder and disappeared. Accounts have lately appeared in the papers of detonating meteors falling in Ireland and England at about the same time ; one in full daylight. Some years ago a barn at Pulham was burnt down by a meteor falling upon it."

The Secretary read a letter from Rev. T. Perkins addressed to the members of the Club who were willing to take part in the proposed photographic survey of Dorset. He reminded them that the season for photographic work was at hand and requested all willing to help to

communicate with him as soon as possible. He urged that the survey to be of any use must be thorough as far as it went and that desultory work was of little value. Each member should do thoroughly one quarter sheet (price 1s.) of the 6in. ordnance map before going on to another, and would provide for himself the materials required for making the negatives. Mr. Barnes said that the cost of printing from the negatives was comparatively trifling and should, he thought, be also borne by the member.

Exhibits.—The Treasurer exhibited a shoot of furze of abnormal growth, flattened out and unusually thick and strong. Other similar shoots occurred on the same bush. Similar flattened malformations of thistles (*Carduus lanceolatus* and *Carlina vulgaris*) had been exhibited on a former occasion by the Secretary and Rev. W. M. Barnes. The Secretary exhibited an unusually large and well-formed crystal of selenite from the Oxford clay, Chickerell, near Weymouth. Selenite was common in some parts of the clay in that neighbourhood but usually took the form of small and broken pieces and perfect crystals were rare.

Mr. Moule exhibited a large ornamental vase, made of lead, one of five similar ones which had been brought from Osmington (possibly Osmington House) and sold as old lead to Mr. Durden, of Dorchester. It was considered that they might be 150 or 200 years old, and they had apparently been at one time gilt.

The Rev. J. Bridges Lewis showed photographs of the font in Great Toller Church. The bowl of the font was of red sandstone and was supported on a block of white Portland stone, which block he considered to be a Roman altar. The block was circular with a sheep's head at one corner.

Mr. Cunnington exhibited four Palæolithic flints found at Coneygar, Melbury Park, Portesham, and Maiden Castle. He stated that Mr. Grant Allen believed that these flints were used with the hand for breaking ice, &c., and when lance-shaped he could not help thinking that they were used as lances.

Mr. Moule showed a diorite stone implement about 9 inches long found near Mr. Middleton's Lodge and presented to the Museum by Major Shephard.

Papers.—The Treasurer read a paper on "The Reptiles of Dorset," illustrating it by a specimen in spirits of *Coronella laevis*, the smooth snake, a rare harmless species, which occurred on heaths in his neighbourhood. This paper will be found in the present volume. Considerable discussion ensued, the Chairman asking for information as to the reptiles found in Ireland. The Treasurer said that he had been unable to obtain satisfactory information on that point, but he believed that some snakes

and frogs occurred there, but not toads. The Secretary, alluding to the Treasurer's scepticism as to the swallowing of her young by the mother viper, said that two of his neighbours, William and Eliza Hunt, whom he had known well for some years, and whose statements were, he considered, quite to be depended upon, stated that a few years ago, when they were about 8 and 12 years of age respectively, they were playing near a certain bank in Tidmoor Lane, Charleston, Chickerell, when they came upon a viper with several young around her, basking in the sun. The group being alarmed at their approach the old viper began to open her mouth and hiss, whereupon the little vipers made for the mouth of their mother and glided down her throat. Mrs. Hunt remembers her children running in, rather alarmed, and saying that they had seen a viper swallow its young ones. The Secretary desired to place this upon record, as he, like the Treasurer, had never before met with anyone who had seen such an occurrence, although it was a general popular belief. He said he thought it was a rare thing to see *a viper with its young*, to which the Treasurer assented, saying that he had never seen such a sight. Mr. A. Bankes and others recommended Condy's fluid, ammonia, washing soda, or indeed any alkali, as good in cases of snake bite. The Secretary mentioned that toads sometimes suffered from the attacks of leeches at some little distance from water, as Mrs. Richardson had found one with several small leeches adhering to it, some little way from a pond. Also that at a reservoir in Carmarthenshire, the natterjack toads were in immense swarms, and such large quantities of them died annually in the late spring that they had to be carted away to prevent the tainting of the water caused by their dead bodies.

A paper on "Charminster Church and its Restoration" was then read by the Rev. Sir Talbot Baker as follows:—

"I have been asked to read a paper on Charminster Church with a view to raising a discussion on the very serious question of its removal, owing to its dampness and liability to floods, to a higher situation, which could be provided for it on the top of a hill not far off. Should this extreme measure be negatived then discussion is invited on the best manner of counteracting the damp and on one or two points connected with its restoration where it stands of presumed interest to antiquarians. I am aware that this church has been briefly, yet ably, treated with the other churches of the Rural Deanery of Dorchester by Mr. Barnes, (Pro. D.N.H. and A.F.C., vol. xii. p. 47 plate iv.), but the temptation to examine it from under the roof of a house that had sheltered Philip of Burgundy and Joan of Castile was too strong to make me resist the invitation to offer some remarks on the subject, even at the

risk of being thought a plagiarist. The suffix Minster suggests a church of antiquity and dignity ; both qualities are united to a considerable extent in the church of Charminster, or the minster on the Char, a stream which, rising up the Cerne Valley, passes close to the graveyard of the church in question and falls into the Frome above Dorchester. The position of the church is pleasing. It is surrounded by a number of small hills, on the slopes of which the houses of the village are placed. The tower is said to date from 1500, and was built by Sir Thomas Trenchard, of Wolfeton ; it is excellent in proportion and of beautiful colour. The material employed in its construction is Ham Hill stone. It has angle buttresses up to the battlements, and the effect of the three finials by which each angle buttress on the corners is surmounted, together with an intermediate finial from the wall space on three sides, is very fine. The turret staircase is on the north-west corner and surmounted by six small finials, three of which have disappeared. This seems to be the only part of the tower needing much external repair, for the coigns preserve their pristine sharpness, and very little in the way of pointing requires to be done. The Louvre windows are very noticeable ; they occupy the whole of the upper storey on each side. They are of pierced stone, and are divided into three parts by two transoms ; they are slightly recessed in each wall. The initials of the founder (T.T.), which appear in several places on the western buttresses, preserve his name, and worthy it is to be held in remembrance by all ecclesiologists. The appearance of the body of the church, as seen from the south, is less satisfactory. A water table on the east wall of the tower points to the nave roof having been at some time lowered, while a similar relic on the east wall of the nave defines the pitch of the original chancel roof. The battlement of the nave roof is singularly plain. The clerestory is low. Its windows are much cut about, so as to render it difficult to determine what date to assign its construction to. But the corbels under the flat ceiling inside point to its not having been part of the original plan. The porch is entered by an arch of such clumsy construction that one is led at once to conclude that it is not of original Norman work, though nearly approaching the round. The present porch roof, too, appears from its poverty to be a modern addition. There are two corbels above the entrance door which suggest the possibility of the porches having had a stone-groined roof, though they might have supported figures. There is a curious set-off along the east wall—halfway up—apparently of the same date as the wall, of which I am unable to conjecture the purpose. There are two gurgoyles on either side above you as you enter the porch, the south-east one remarkable,

and the base of a cross on the apex of the roof. The archway leading into the church appears to be part of the first design. It is of early-pointed style, and the jambs are cut from stones of large dimensions. The general impression on entering the church is the want of height, but this will be partly remedied when the ceiling of the nave is removed and the roof restored to its original pitch. The nave consists of four bays. They are distinctly of the Anglo-Norman period. The cushion caps of the round columns are variously and prettily, though not very deeply, incised. The pointed arches which they support are surrounded by the nail-head mouldings ; this angle is shallow. The south aisle has a panelled roof of Perpendicular period. One corbel remains on the south side, representing a knight's head. This bears a rude strut that carries one of the beams. The south evidently was the Trenchard aisle. There are two canopied tombs, one along the south wall and one at right angles to it ; this latter has manifestly been moved from its original place to let in a more modern window. They are of Purbeck marble, but all records of the persons to whom they were erected have been removed. Eastward of these on the same wall there is a touching tablet to a lady of the family, of which the following is the inscription, translated from Latin :—' Sacred to the pious and honoured memory of the esteemed second daughter of Thomas Trenchard, Knight, and lately the deceased wife of William Pole, Knight, the eldest son of John Pole, Baronet, whose bones rest beneath this marble, while her sainted soul triumphs in heaven and her loved memory smells sweet on earth. She died, without leaving surviving issue, on the 9th day of February, A.D. 1636. Two infants, John and William, prematurely snatched away, are buried at Colyton, in the county of Devon." Above this inscription is the monument, on which is sculptured a lady in flowing gown and tippet kneeling before a desk on which is an open book. On the opposite wall to this tablet are some faint traces of mural paintings. Care should be taken in moving the whitewash close by them, but I fear that nothing worth preserving would be found. There are the remains of a squint or hagioscope leading from this aisle ; proofs exist that the east and south window of this aisle were filled with painted glass ; some round panes still remaining in the top tracery of each show the old Tudor rose. The north aisle was built in 1838. It was enlarged to probably double its original size. The walls seem in good preservation, but the roof requires immediate attention. A gallery, dating from the last century, blocks up a fine-pointed arch into the tower. If removed there would be disclosed an unusual feature of village church towers—namely, two side arches opening into recesses

north and south, the soffits or spaces between the jambs of all these arches being ornamented with Tudor mouldings. One of these recesses serves as a small vestry ; the other is unappropriated. It might be used for a choir vestry or a baptistry. The west window is at present half blocked up. This, of course, would be remedied. We now come to the chancel, which was erected about 56 years ago and occupies but a small portion of the space of the orginal chancel that was pulled down during the Commonwealth. The chancel arch is Norman, and has also the nail-head mouldings of the same shallow character as the pointed nave arches. Complaints are made that from its smallness it obstructs the sound of the voice from a diminished chancel. How much more would it do so from the chancel restored to its original size ? It is this objection that has led to the suggestion of the arches being removed to the new north chancel wall to form the entrance to the organ-chamber, which it is proposed to build on the north side of the chancel. It would be replaced by a pointed arch, resembling that into the tower. This brings me to the second division of my paper, to which the previous sketch of what I could see of the church in an hour or two's inspection on two mornings lately is intended to lead up. It is on the question of how is this interesting church to be restored, nay, of its being restored at all where it stands, for I have been asked to offer an opinion, as I stated at the outset, on the advisability of its removal altogether to the summit of a hill on the south, just in front of the new vicarage. What, you will enquire, could justify such a question being even mooted ? The answer is the lowness of the present site, subjecting it to being flooded when the little river is overfull, and, as I am informed on reliable authority, rendering the floor of the church very damp whenever the water meadows are flooded. The subsoil of the whole area is stated to be gravel, and when the water of the meadows percolates the top soil it finds its level beneath the bed of the stream (for the meadows are on the further side of the stream from the church and graveyard) into the gravel stratum below and comes up into the graveyard ; to the floating of the coffins occasionally in the newly-dug graves, and filling the vaults which exist underneath the floor of the church with water ; also to the rendering of any system of heating the church from a furnace chamber below exceedingly difficult, though, I think, not impracticable. This condition of things is, no doubt, serious. The confining of the water of the little river within its bound- might be effected by a concrete or cemented dam and by widens ing the arches of the bridge which spans it at the south-east corner of the churchyard : which arches are obviously too small to carry

the water in a wet season ; but the prevention of the soakage of the irrigated meadows above into the gravel substratum under the bed of the river into the church and its surroundings presents a problem which might be hard for an engineer to overcome, and which I certainly shall not attempt to solve. I can only speak of what I saw ; and I can safely say that though my attention had been directed to the presence of damp within or without the church I did not observe many traces of its existence either on the surface of the graveyard or in the foundations of the walls outside or inside or on the floors. Compared with some other churches I have seen this church was dryness itself, on the days of my visits. The turf around it was not soppy and the foundations of the walls did not seem to be affected by wet. Inside there was no striking appearance of green mould at the bottom of the walls, nor, as far as I could see, any rottenness in the floor boards. Relatively to the river-bed the church is sufficiently protected, so that with its vaults concreted to the floor level and the foundations of the walls outside cemented, with a stone gutter to carry off the roof water sloping outwards from them, I cannot but think that it would be perfectly dry and healthy in the ordinary way. Against extraordinary high water such measures as forming a groined cemented bank and a widening of the arches of the bridge would be sufficient safeguards. I believe, moreover, that the gang-ways floor of the inside might be raised four inches (to the level of the wood boarding below the pews) so as to do away with the step down at the outer porch without cutting off the view of the round bases of the columns. If the irrigation soakage evil is of frequent occurrence, so as often to interfere with the decent interment of the dead, it might well be an inducement to shut up the churchyard and form a cemetery on higher ground, but not to move the church and tower—and tower—why, the taking down and rebuilding of such a massive structure—and no man of education and taste could counsel its demolition—on another site, would cost more than its careful restoration with nave and south aisle, and I was going to say than the rebuilding the new chancel on the old lines and organ-chamber to boot. Nor does the state of the walls of the body of the church justify such a step. I could not perceive any deflection of old walling from the perpendicular, nor more than two slight cracks in it ; these were in the west walls of the aisles where they join the tower. There is nothing in the way of an ordinary restoration that I could see. The taking down the organ gallery and opening out the tower, the stripping the roofs : raising the nave, and restoring the south aisle, roofs, and the removing the old pews and benches (I do not recollect that any of the latter are worth preserving), and replacing them with open seats.

Whether the north aisle is to remain depends upon the state of the funds. There would be no great harm done to the general appearance of the church if it were to remain, the roof of course being made weathertight. It never could be made to look old, and the accommodation its additional width affords may forbid its being reduced to the narrower proportions of the south aisle, which were, no doubt, its proportions when first built. The enlargement of the chancel would give dignity to the whole edifice, and the organ chamber on the north side of the chancel would be the proper place for that instrument. I now appproach the last, but most delicate, part of my task—the moot point of the pulling down the chancel arch and its removal to the north chancel wall, where it would form the entrance to the organ chamber. I have already stated the cause why this change is suggested. It is owing to the small size and comparative lowness of this Norman arch preventing the sound of a strong-voiced hale incumbent from being well heard in the body of the church that a measure is proposed that would meet with fierce opposition from all sound archæologists. And, indeed, it should be only a stern necessity that would justify such a step being taken. It is true that a church exists for the purpose of a congregation's orderly worship of Almighty God according to the ceremonies of the Church of England. Whatever tends to the promotion of such worship should be cherished and, as far as can be, adopted. Any hindrances to it, even to the removal of an ancient monument, should in my judgment be taken away. Thus, sorry as I should be to see it on archæological grounds, were a large tomb to interfere with the sight of the altar by any considerable number of worshippers and a suitable nook be found for it in some other position in the church I would not, as far as my voice would go, oppose its removal, *e.g.*, I should have been in favour of the transference of the Denzil Hollis monument in St. Peter's Chuch, Dorchester. But in the case before us no such necessity as far as I can judge exists. The old arch is not so small, relatively to the size of the wall in which it is placed, as others I have seen. To go no further off than Powerstock, there you certainly have a far more enriched Norman arch, but so disproportionately small to the dividing wall between nave and chancel as even to offend the eye as you enter the church, left in its integrity, though the chancel was entirely rebuilt at the restoration in 1858, and, no doubt, another place could have been found for it. I was frequently at Powerstock when the County School was being started, yet I never heard of the diminutive size of the chancel arch interrupting the sound of the voice. It should be borne in mind, too, that the openings into the proposed new organ-chamber from the chancel and from the north aisle,

and also in the opening out of the hagioscope to the south aisle, will operate materially in spreading the voice of the officiating minister at the altar. Possibly, too, the cause of the difficulty in hearing a strong voice at present may arise from the very shortness of the existing chancel, and a chancel of its original and greater length might act as a better conductor of the sound. So that, as I cannot recommend the removal of the church, I can neither advise the taking down of the chancel arch from the position it has stood in for near about 700 years."

A great deal of discussion followed the reading of this paper. The Rev. W. M. Barnes said that he felt sure that the church could be made dry by cementing the floor and lower part of the walls with Portland cement as had been done in his own church at Monkton. The foundations of the nave of, he believed, 15th century work had been discovered in digging graves. The Rev. J. C. Prior (Vicar of Charminster) said the foundations of the chancel which was swept away in the time of the Commonwealth had been traced and that it was 26 feet long. The present chancel was 16 feet in length. The Rev. J. Bridges Lewis said that drainage had had an excellent effect at Salisbury as regarded the dryness of the Cathedral, and suggested a similar expedient for Charminster. He also said that perhaps the ancient Norman chancel was in the form of an elongated apse, which might remove the difficulty about the sound. He thought it would be well if all people wishing to restore an ancient church would first consult a body like the Field Club and hear their views and that no one had a right to destroy or pull to pieces such ancient monuments without some such consideration. The Rev. O. M. Ridley said that after hearing Sir T. Baker's paper he quite receded from the idea of moving the church to higher ground. It would be much better to try some other expedient to prevent damage by floods. The Rev. J. C. Prior said that the churchyard suffered very much from water rising in opened graves, on several occasions to such an extent that the coffin had to be held down with poles, and generally baling had to be resorted to. He also spoke of the great difficulty which the narrowness of the chancel arch caused in regard to sound. It was most difficult to hear anything in the chancel of what went on in the church or vice versâ, and in spite of the strong feeling which had been expressed by the antiquarians against moving the arch he should be most glad for it to be done, as he thought the convenience of the congregation should be the chief point aimed at. Mr. Barnes suggested the moving the choir stalls out of the chancel, but Mr. A. Bankes said that he thought there was not sufficient room, as the church was a small one and the congregation often large. The Rev. O. P. Cambridge said that in his churchyard at Bloxworth baling

had often to be resorted to, though it was 200 feet above the sea and not near a river. He mentioned the great advantage to the dryness of a field of keeping ditches and outlets clean and open. Having offered the thanks of the Club to Sir Talbot for his paper an adjournment of three-quarters of an hour was made for luncheon, it being about two o'clock.

After luncheon Mr. Chas. F. Hope gave the Club some information about *Lathyrus sylvestris*, on which he had been unable to write a paper as set forth in the programme through want of time. Professor Wagner had succeeded in producing a variety of this plant (Wagner's flat pea or *Lathyrus sylvestris Wagneri*), which was of great value in agriculture. It is maintained that the plant will yield on an average 17 tons of green food (equal to about 4 tons of hay if dried) to the acre per annum in 3 or 4 cuttings which should be made just as it comes into bud, the plant then being about 15 inches high. It is stated that the plants will continue in bearing for 40 or 50 years with no manure, and will grow on waste stony ground, where nothing else will flourish, and resist the most unusual drought.

Mr. Hope has analyzed a sample with the following result :—

	Lathyrus sylvestris.		Average Composition of Green Plants for comparison.		
	Green.	Dry.	Lucerne.	Vetch.	Clover.
Moistur	58·63	0·00	75·3	82·0	78·0
Fat, Chlorophyll, Wax, &c. ..	2·05	4·95	0·7	0·6	0·8
Albuminoids (N. X 6. 33) ..	7·54	18·22	4·5	3·7	3·7
Digestible Cellulose, &c. ..	16·48	39·85	8·4	6·1	8·6
Indigestible Fibre	12·21	29·52	9·3	6·0	7·2
Mineral Matter	3·09	7·46	1·8	1·6	1·7
	100·00	100·00	100·0	100·0	100·0
Containing Nitrogen	1·11	2·85			
Equal to Ammonia	1·41	3·49			
Albuminoid Ratio	1	: 4·5			

Mr. Hope proceeded as follows :—

"About two hundred and fifty plants were given to me by Mr. F. E. Clotten, six of which were accepted by the Yorkshire Philosophical Society, and planted in their gardens in November, 1889, to which lot the above analysis refers. The plants appeared very dry and much shrivelled, but in spite of their unpromising appearance, the whole of the six plants lived, but several out of the larger lot, which were accepted by a skilled farmer, died. The six plants did not produce a robust growth—possibly due to the city smoke, and their uncongenial treatment before they were received in York. The average length of the haulm was about two feet, and the maximum three feet, the younger part of which appeared more robust and better developed than the older. All the flowers aborted ; the blooms withered in August, when the plants were cut and analyzed

by myself, yielding the quantities stated above. The roots (rhizome) were about as thick as a lead pencil when planted in November, 1889; but when one was dug up in November, 1890, to send to Egypt, they had attained the thickness of a man's thumb, many new rhizomes had been produced, reminding me of the characteristic rambling habit of the wild variety, which has not been observed to produce seed (Wagner);* but under cultivation, seed appears to be produced, a sample of which I have. Mr. Clotten informs me that the germination is very slow, indeed: that he has been unjustly blamed for having doctored the seed, and that much has been dug up and destroyed before germination could take place. There appears good reason to hope for a more robust growth next season. The farmer who accepted the larger parcel reports, 'not much to eat; hope for a better crop next year.' The plants were seedlings, and like Lucerne, it requires three seasons to arrive at maturity. *Lathyrus sylvestris* appears to contain fully twice the quantity of actual feeding material, as compared with any of our cultivated fodder crops, weight for weight, in the natural green condition, the great difference being in the relatively much smaller quantity of water naturally present in *Lathyrus sylvestris*. It is to be regretted that Professor Wagner's analyses do not state the percentage of water. Upon comparison it will be seen that the plants grown in the Museum gardens are distinctly less valuable than those grown in Germany; but it being well known that a bad crop is not only less in quantity, but is also much poorer in quality, there is no reason to think the virtues of the new plant have been overstated. Indeed, the general statement that the plant is twice as valuable, weight for weight, as any fodder crop grown I have already confirmed. It is well known that the young or early growth of plants has a higher percentage composition than that of the same plant when mature. It is probable that the sample analyzed by Professor Wagner refers to the succulent spring growth; whereas the analysis I made was of the mature plant, cut in August after blooming, which fact may be quite sufficient to account for the slightly lower quality of the produce. The palatability is a quality of very great importance which cannot be ascertained satisfactorily in the laboratory, but I understand from my farmer friend that it is all that can be desired; cattle eat it at once, and appear to relish the same. The ether extract (otherwise called oil or fatty matter) is not as

* The legume and seed of the wild plant are figured and described in Sowerby's English Botany, Vol. iii., p. 106, plate 402; also in Curtis' "Flora Londinensis." Mr. W. B. Barrett informs me that they are also described in "Babington's Manual," "Hooker's Flora," Brébisson's "Flore de Normandie," and Lloyd's "Flore de l'Ouest de la France." None of these writers give any intimation that the plant does not seed freely. Wagner's experience seems therefore to be, to say the least of it, unusual.—Ed.

valuable for feeding purposes in any of our green crops as the oil in a cotton or linseed cake, but it is present in nearly three times the usual quantity in *Lathyrus sylvestris*. *Albuminoids.*—The compound nitrogen, according to Professor Wagner's analyses, appears to be present very largely in the form of true albuminoids, the quantity of amide nitrogen being very small. I have not ascertained this quantity, because recent experiments appear to prove that the amide compounds protect the true albuminoids from oxidation in the process of animal nutrition. Hence the ordinary commercial method is sufficiently accurate for the farmer's purposes; the amount of amide nitrogen in young and in the younger parts of plants is always in excess of that found in the mature plant. Cattle appear to prefer and to thrive upon young succulent herbage. The albuminoid ratio being 1 to 4.5 most nearly resembles the concentration of bran 1 : 4.2 than any other commonly-used single food. Hence it must be considered a very concentrated food, which in practice it will be found desirable to dilute with straw or turnips until the desired ratio is reached. The most approved ratio for fatting cattle being 1 : 7 at the commencement, which is increased gradually to 1 : 5.5 to finish. The ratio appears correct for sheep or swine without any alteration. The ratio of oats being 1 : 6.5, it appears more than sufficient for a horse without any corn. When feeding any of our home-grown green fodder, it appears economical to purchase a more concentrated food in order to get the albuminoid ratio up to those standards which have been proved by experiment to be the most economical, but here we have what I trust may become a home-grown food which can be properly diluted with poorer home-grown produce. Hence as *Lathyrus sylvestris* becomes commonly grown the farmer will probably become more and more independent of the cake merchant. Cake being a bye-product in the production of oil will become more difficult to sell, and the market price will tend to the advantage of the farmer. At the same time we must not forget that the plant is yet in the experimental stage. What is known has not been exaggerated, but a more intimate acquaintance may cause us to moderate our present opinion. But let us hope to the contrary. *Cultivation.*—The plant more nearly resembles that of a Lucerne than any other at present in cultivation, and in the absence of any better information, I am disposed to advise that it be cultivated upon the same lines, controlled, however, by common-sense observations. It resembles Lucerne in being a member of the same natural order, viz., *Leguminosæ*, in which we find some of our most useful plants such as clover, beans, peas, vetches, &c. Hence its near relations are well known and highly valued. Like Lucerne it is a perennial, and may require the three years to come to maturity.

Lucerne is the most concentrated food among our green crops at present cultivated, but its excellence will be seen not to be very considerable upon referring to the analyses cited for comparison at the beginning of this report. *Lathyrus sylvestris* will be seen to contain twice the quantity of food. It is difficult to understand why Lucerne has not become a greater favourite, entering more into common husbandry than it has done. The advantage of its being a perennial, lasting for ten years, does not appear to have recommended it. Hence, if it were not for the very superior value of *Lathyrus sylvestris*, I should fear the new plant would not meet with any greater favour than Lucerne has done. Like Lucerne, it seems well adapted for awkwardly-shaped fields near the yards, where it would be convenient for soiling purposes. For suburban dairymen, having very little land at a high rent, it appears a very suitable plant, and one well worth a trial. Lucerne appears to yield good crops until the tenth year, when the vigour of the plant declines, and it is found necessary to plough it out, and after one or two other crops to sow the seed again; that is to revert to the sexual generation again. How long *Lathyrus sylvestris* may remain profitable without a sexual generation (that is, without re-sowing) is at present unknown; but, like all other plants I suppose it will be found necessary to renew its vigour by sexual intercourse. A familiar example may be found in the potato, in which after a greater or less number of non-sexual generations (those raised from sets), the plant becomes feeble and a prey to disease, and that particular stock goes out of cultivation to be replaced by another reared from the seed. That is the true sexual generation, which, being a general natural law, will, no doubt, govern the number of years an established plant of *Lathyrus sylvestris* will remain a profitable plant. But owing to the fact that the wild variety does not appear to have been observed in pod (see note ante), it is possible that a particular stock may last more than ten years, which will be counted as another advantage. But it would not be wise to rely upon this point until experiment has placed the matter beyond doubt. As to the weight per acre there do not appear to be any data, excepting that furnished by Mr. Clotten, who mentions seventeen tons as the weight grown per acre. Lucerne appears to yield from three to eight tons per acre, and is cut three or four times per annum. Hence the figures do not appear to be exaggerated, as representing a very good crop. But seeing that the yield of all our crops varies between very wide limits, owing to the ever-varying conditions of soil, manure, and season, I do not think any safe estimate can be given, but if only ten tons were gained it would be equal to twenty of anything else we can grow. Everything depends upon the

environment of the plant being favourable and the number of times it is cut. I lay great stress upon the latter point, because I find no error more common than allowing, say hay, to stand until the seed is nearly ripe, whereas it should be cut before there is any seed. The damage in the decreased digestibility of the hay and the decreased quantity of aftermath is more than the average farmer thinks possible. In the proper cultivation of this new plant I suppose the colour of the bloom should never be seen. 'Cut and come again' should be the motto. *Manure.*—I venture to differ entirely from the opinions expressed in Mr. Clotten's circular, which, in brief, is equal to saying we can by this plant draw food from the soil for ever without returning any of it. We have no proof that a plant can derive all its food from the atmosphere, but we have very positive evidence to the contrary. We know that by continually removing crops the soil becomes less and less able to produce a crop; that when we apply to a soil thus impoverished by the continual demands made upon its resources, those elements essential to a plant in a soluble form, the fertility is at once renewed. Hence, sooner or later, manure will be required, depending upon the quality of plant-food originally present, and the size of the crops removed (the demands decrease the supply). By inductive reasoning (unfortunately we have no experiments), I think nitrate of soda will not be a profitable application, neither will sulphate of ammonia. Perhaps the most generally beneficial will be lime well mixed before planting; but here, again, everything will depend upon the nature of the soil. Farmyard manure, the best of all manures when good, may be applied with advantage. Superphosphate, and bones, and shoddy, and in some cases kainite, will all be found useful, according to the requirements of the soil. *Lathyrus sylvestris* may be made into hay, treating it carefully, as in the case of clover or vetch hay, and, of course, into silage. From what I have seen of the plant I do not think it adapted for feeding on in hurdles, but suppose it will be less wasteful to soil if in yards. If sheep were folded, I think the plant would be almost destroyed; they would get too near the crown; in a word, the plant may be treated and used in a similar way to Lucerne."

The next paper was read by the Treasurer "On New and Rare British Spiders," and will be found in the present volume.

The Mayor of Dorchester and some of the Town Council attended the meeting by invitation of the Club in order to hear the next paper by Mr. H. J. Moule, "Notes on Two 17th Century Minute Books belonging to the Mayor and Corporation of Dorchester." This paper will be found later in the present volume. Thanks having been offered to the readers of the various papers the proceedings terminated at about 4 p.m.

Dorset Natural History and Antiquarian Field Club.

Dr. *RECEIPTS and EXPENDITURE from May 5th, 1893, to May 22nd, 1894.* **Cr.**

1893.	RECEIVED.	£	s.	d.
May 5.	—Balance from 1892-93	0	18	4
	Subscriptions and Arrears to May 22nd, 1894	185	8	3
	By Sale of "Proceedings"	8	13	10
	Do. do. "Spiders of Dorset," "Phalangidea," and "False-Scorpions"	4	8	6
		£199	8	11

1893.	PAID.	£	s.	d.
July 17.	—Morgan and Kidd, Plates (Vol. xiv.) ...	3	2	6
,, 28.	—Sime and Co., on Account of Balance due from 1891-92	25	0	0
Aug. 19.	—Meisenbach Co., Engraving Plates (Vol. xiv.)	2	3	7
,, ,,	—Subscription to Footpaths' Preservation Society	0	10	6
Oct. 7.	—Sime and Co., Balance of Account due ...	12	4	9
Dec. 1.	—Morgan and Kidd, Plates (Vol. xiv.) ...	5	5	6
Dec. 30.	—Bank Charges	0	2	6
1894.				
Jan. 4.	—Mintern Bros., Plates (Vol. xiv.)	9	15	0
,, ,,	—Hollick do. do.	3	10	0
,, ,,	—Wilson, Printing Plate	1	18	6
May 16.	—Sime and Co., Bill for 1893-94—	£	s.	d.	
	Printing Programmes of Meetings	9	15	0	
	Advertising do.	3	8	6	
	Printing Receipt Forms, &c.	1	4	2	
	Postages of Four Vols. xiii. to Members	0	1	6	
	Printing Authors' Copies of Papers in Vol. xiv. ...	6	17	0	
	Carriage and Postage of Vol. xiv. from Office ...	1	19	4	
	Printing Vol. xiv.	89	0	9	
	Printing Chart and Table for Buckman's Paper in Vol. xiv.	3	10	0	
					115 16 3
,, ,,	—Treasurer, Stamps and Postage of Vols. xiv., &c.				3 0 6
	Balance in hand, May 22nd, 1894				16 19 4
					£199 8 11

Total Expenditure for the year ... *£182 9s. 7d.*

Dorset Natural History and Antiquarian Field Club.

HON. SECRETARY'S ACCOUNT from May 1st, 1893, to April 30th, 1894.

Dr. RECEIVED.	£	s.	d.
1893.			
Balance in hand May 1st, 1893	0	3	11
Balance on Incidental Expenses at Meetings at Moyles Court, Shaftesbury, Abbotsbury, and Central Dorset	5	13	3
	£5	17	2

PAID.	£	s.	d.
Voss, for Meetings May 18th and Dec. 8th, 1893, and March 15th, 1894	0	15	0
Hon. Sec., Stamps, Postcards, &c.	4	16	7
Balance in hand	0	5	7
	£5	17	2

Cr.

Anniversary Address of the President.

Read before the Members of the Field Club on May 23rd, 1894.

I had made no preparation for my usual Anniversary Address, as I understood, when you did me the honour last year of electing me your President, that I should be exempted from much of the literary work devolving upon the office, and be let off with an occasional Paper. I have, however, hastily written a few lines upon subjects which will, I hope, be interesting to the members. General Pitt Rivers with his undiminished industry is prosecuting the examination of the earth-works on the Rushmore Estate. He is now finishing those of Worbarrow, in the parish of Hanley, which he finds to be of the Stone age. The primary interments were found on the old-surface line, consisting of six skeletons, three were crouched, and all long-headed men. At the top of the barrow were eight secondary interments, five were decapitated, their heads missing; the average cephalic index of the remaining three was 738, that of the 6 long-headed men 698. The average height of the former was 5ft. 5·4in., that of the latter 5ft. 2·2in.—a difference of more than three inches, bearing out the idea, in General Pitt Rivers's opinion, that the primary interments were those of the Stone-age people, the

secondary interments were of another race which had probably crossed with the round-headed large people of the bronze age. The skeleton of a round-headed man was found buried near the barrow with a drinking vessel of the usual type at his feet. In the old surface-line beneath the barrow there was an oblong enclosure, which included the primary interments, consisting of a trench 2ft. deep with traces of a line of piles stuck in the trench and wedged in with flints. The ditch of the barrow, which is 13ft. deep, contained bronze age pottery at the bottom, and Roman pottery at the top. This corresponds with the relics found in the ditch of a village close by Worbarrow, and in the ditch of the camp which General Pitt Rivers examined last year at Rushmore south lodge. In all these, Roman pottery and relics were found at the top only. No pottery, not even the smallest fragment, was found in Worbarrow, except one small piece, found with the six primary interments on the surface-line.

Four human skeletons of the neolithic age have been recently found in a cave or fissure of a limestone cliff on the Italian frontier, near Mentone, one (the last) in January. I had the pleasure of visiting the cave last May, which stands at the base of a grand Eocene cliff washed by the waves of the Mediterranean. It measures about 80ft. long and 10ft. broad, its walls converge till they meet about 50ft. above the present floor. Three of the skeletons were found on the east side of the cave last year, about 25ft. below the original floor and near the mouth ; they were lying close to each other. The outside skeleton was that of a man advanced in years, lying on its back, the left arm stretched out along the body, the right hand resting on the femur, and near it a slightly-curved finely-edged flint implement, or blade, 9in. long and nearly 2in. broad. The height of the skeleton was not less than 7ft. The middle skeleton was that of a young woman. The head rested on the leg bone of an ox, it was lying on its left side with the knees slightly bent; in the left hand was a flint implement 10¼in. long and 2¼in. broad. The third or inside

skeleton was also lying on its left side, the head resting upon a flint implement $6\frac{3}{4}$in. long and 2in. broad, similar to the two others. The man had a collar of 14 deer's teeth, with fine-cut striæ, fish vertebræ, and pendants similarly striated. On and around his head were deer's teeth, fish vertebræ, and a number of little marine shells, *Nassa neritia*, all pierced; under the knee of the left leg were large perforated shells of the Genus Cypræa. The skull of the young man was also adorned with fish vertebræ and shells (*Nassa*), several bone pendants, and a handsome collar, which length of time had not displaced. It was composed of a double row of perforated fish-vertebræ, and one row of *Nassa*, which was separated at equal distances by striated deer's teeth, and arranged in perfect symmetry. Below the double row of fish-vertebræ (four in each row) were three *Nassæ*; then a deer's tooth, which divided them from the next series, and so on. The collar evidenced some considerable artistic taste on the part of these savages. The skull of the man was too incomplete through posthumous deformation to permit an accurate measurement. It was decidedly of long-headed type, with an index of 63, while that of the young person was less typical with an index of 76.27. The adult is allied to the Cro Magnon type, by the pentagonal form of the skull, by the breadth of face, by the relative narrowness of the nose, by the massive lower jaw, and the triangular shape of the chin. The teeth are well worn down, and the crowns flat, indicating advanced age. On the other hand those of the young person are little worn, and the last molar had not come into use, showing that the age was not more than 20 years. The other skeleton was discovered in the same cave some 10ft. above the three others, as it has been already said, and further within. It was lying under a bed of cinders and burnt wood, mixed with ochreous ferruginous red-earth, with debris of broken bones and remains of animals of various species, some of which are now extinct. Upon its head and limbs were ornaments similar to those described above. The skull had well marked frontal sinuses, it was lying facing the east, and close to the wall on the

east side of the cave. The earth and stones around the skeleton, which appeared to form a kind of sepulchre, as well as several flint-chips, had traces of fire, which had partly calcined the lime of the breccia on which it reposed. A conical block of crystal, the point of which was broken, lay under the right hand of the skeleton, which might have been a weapon or an insignia of dignity. It was lying on its left side, the face supported by the left hand, the lower jaw was displaced from the skull. The forearm and right hand were lying across the breast. It had the appearance of peaceful repose, as if death had overtaken the man in his sleep. This appears to have been the position of most of these southern prehistoric interments. The skeletons of the neolithic age in our barrows and earthworks are often in a crouching position—that is the head and knees are on the same level, which is the usual sleeping position of the North American Indians of the present day. It helps to maintain the warmth of the body better than when extended. The extended position of these Italian neolithic people indicated that they lived in a less rigorous climate. The height of this prehistoric savage was about 6ft. 6in.

An ancient lake-village was discovered last year near Glastonbury by Mr. Arthur Bulleid. The site had been an ancient shallow-lake or morass upon which a colony of the former inhabitants of this district had settled. It consists of a number of low mounds, about 2ft. in height and from 20ft. to 30ft. in diameter. One 3ft. 6in. deep, was composed of layers of clay, charcoal, ashes, and timber, resting upon wooden piles laid close together, still retaining the bark. Each of the dwellings contains a fire-hearth of stone-slabs laid upon a bed of clay ; occasionally there were two, and even three, placed one over the other, owing, perhaps, to the sinking of the floor-bed. Mr. Boyd Dawkins considers the date of this lake dwelling to be close to the dividing line between the prehistoric archæology of these islands and history. The inhabitants of the village were spinners and weavers ; they used whorls of stone and earthenware, heavy stone loom-weights to keep

the threads in place, bone-shuttles, weaving-combs, and bone-needles for sewing. They probably worked with the lathe, as may be inferred by the numerous chucks of Kimmeridge-shale, also lathe-turned vessels of earthenware. Crucibles and remains of smiths' bellows point to smelting. They used rings of jet, amber, glass, and bronze, bracelets of bronze and Kimmeridge-shale, glass-beads, bronze-safety-pins, and split-ring-brooches, with bone-links similar to those found in Victoria Cave in Yorkshire. There are also bone amulets. Their huts were round and made of wattle. They grew wheat, and had sheep, cattle, *Bos longifrons*, pigs, horses, and dogs. They ground their corn in querns, and worked their food by putting hot stones into their pots filled with cold water. They rode or drove their horses with iron snaffle-bits, their weapons of war were daggers, halberts, billhooks, and sling-stones, vast numbers of which have been found made of clay, both burnt and unburnt. Mr. Boyd Dawkins considers that the fragment of a long human skull, with a low forehead and strong frontal sinuses, implies that some of the inhabitants belonged to the long-headed section of the Britons. In his summary he says the pottery is distinctly of southern derivation and of the late Celtic type, and belongs to the late period of the Iron age, before the Roman influence had fully penetrated into Britain. The split-ring fibula and the bone-links are identical with forms of Romano-British type. The absence of Roman pottery and of coins implies that the Roman civilization had not arrived in the Isle of Glastonbury. On a comparison with the late Celtic remains found by General Pitt-Rivers at Mount Caburn, near Lewes, it is found that the iron-tools and weapons, the earthenware sling-stones, the pottery, and various other articles, as well as the wattle-work, are practically the same and belong therefore to the same age.

The extinction of wild animals is becoming daily a question of the greatest importance, and demands the co-operation and efforts of naturalists to prevent their annihilation. Although valuable both for food and commerce they are relentlessly pursued and massacred for momentary gain. The most remarkable instance is

that of the American bison, which formerly ranged over about one-third of the North American Continent from the Atlantic shore of North America, across the Alleghanies to the prairies above the Mississippi and southward to its delta. It also wandered across Texas to North-Eastern Mexico, across the Rocky Mountains to Utah and northward to the Great Slave Lake. In consequence of the settlement of the country by Europeans the area was gradually contracted, and about 1840 it occupied the centre only of its former range. The Union Pacific Railway divided this great central herd into a southern and northern division, the former consisting of about four millions, the latter of about one and a-half millions. Between 1869 and 1880, that is to say in eleven years, the southern herd practically ceased to exist. In a short time 20 stragglers in Texas represented the last of them, a similar fate overtook the northern portion. In 1883 a herd of some 200, derived from the northern herd, was preserved by the United States Government in the Yellowstone National Park. In 1886 the taxidermist of the Smithsonian Museum of Washington was directed to secure a complete series of fresh skins and skeletons of the Bison, and finding there were none, excepting those in Yellowstone Park, he took out an expedition to Texas, where the party found a herd of 50 or 60, which had found shelter there since the destruction of the great northern herd in 1881-83 and in fancied security, but the settlement of the country by ranchmen doomed every one of them to destruction. Three were taken in the expedition and 22 afterwards. Their skins and skeletons are described as being now of almost "priceless value." The European Bison, which was once common throughout Central Europe, the Caucasus, and Carpathian Mountains, is now found only in the forests of Lithuania, where it is saved from immediate extinction by the protection of the Russian Emperor. Some years ago the Lithuanian Bisons numbered 1,000, in 1870 they had diminished to 528, and all attempts to domesticate them have failed. It is a sad certainty that in a very few years the Elk, or Wapiti, Mountain Sheep, Goat, Deer, Moose, and other forms will have totally disappeared.

At a recent meeting of the Zoological Society African hunters from various parts of the Continent were present. All told the same tale—that animals which were abundant a few years ago near the coast must now be sought for a month's journey inland. It is much to be hoped that those who have authority over the vast areas which have lately come under their protection will do something towards the preservation of the fauna of these territories. Unless some stringent steps are taken to suppress the wholesale destruction which is now permitted, the highlands of Africa will be depopulated of the big game, which is diminishing each year in lamentable proportions.

Aquatic animals, such as Seals, can with ease be entirely exterminated, especially when, like the Fur-seal, they forsake the water and resort to land for breeding. The Fur-seals of the Pacific and Antarctic are now nearly gone, except in two groups of islands—one in Alaska, and the other in Siberia, where they enjoy Government protection. Aquatic mammals which never leave the water, like Whales and Sirenians, and do not multiply rapidly, especially when they breed near the shore, are also liable to extermination. The Arctic Sea-Cow *Rhytina stelleri* is extinct within the present century, and the Pacific Grey-Whale *Rhachianectes glaucus* is practically so. In the year 1877 a close time for Seals came into operation, which includes an area between the parallels of 67° and 75° north latitude, and between the meridians of 5° east and 17° west longitude from the meridian of Greenwich. Not a Seal is killed till April 3rd. The northern Seals are now no longer killed without mercy when they come to suckle their young, and the latter left in thousands to die of starvation. In the *Zoological* for March, 1885, is the following account of the destruction of a colony of young Seals by sealers on the coast of Greenland:—"After great exertions had been made to work through the ice, the breeding pack was discovered covering a space of about eight miles in extent from east to west, and one and a-half broad. Forty-eight men were sent on to the ice to kill the young seals at one o'clock a.m. About noon on April 7th the whole brood was killed." As no other

breeding Seals were met with, it may fairly be presumed that all the young broods perished. The Walrus, too, which was met with in the 16th century as low as the southern coast of Nova Scotia, and in the last century was common in the Gulf of St. Laurence and on the shores of Labrador, is now confined to a very limited area.

The extirpation of birds is also a subject of great anxiety to the naturalist. There is no doubt that many of our native birds are rapidly disappearing, as Lord Lilford warns us in the *National Review* of April. Not only Owls and Hawks are viewed with detestation by the average game preserver, but Magpies and Jays, which are neither so numerous as Rooks and Jackdaws, nor more destructive to eggs and young birds. The Rook will beat a hedgerow for eggs as carefully as a pointer for its game. With the greatest care of my gamekeeper Shave, I am able to save a few chance broods of Kestrels, Crows, and Magpies, and to hear the croak of a pair of Ravens which I always fain hope will breed within our precincts. There is no visible increase from year to year, for death meets the survivors outside this asylum.

Unless some restraint is imposed upon the destroyers of our sea-birds our shores and cliffs will be entirely denuded. A correspondent in *Nature* some little time ago spoke of a dealer having boasted that 9,000 or 10,000 Gulls and other shore birds had passed through his hands in one year, and that he had got 800 in one batch from one person. In 1891 Lord Lilford called attention to a scheme whereby a Birmingham Company prepared to take from the Shetland Islands during the spring of that year no less than 20,000 eggs, including many beautiful and rare varieties. His intervention was, I apprehend, the means of the abandonment of the proposed expedition.

Mr. Harting's "Handbook of British Birds" with records of our rare visitants shows that the majority of them, especially those of gaudy plumage, as the Bee-eater, Roller, Hoopoe, Golden Oriole, &c., for the most part met their deaths in one of the maritime counties, killed before they had brought up their broods. A pair of Golden Orioles bred in the New Forest last year and returned in safety to

their winter quarters with their young brood. A pair, probably the same, appeared again this year in the same locality.

A close season in France has been the means of a large accession of small birds, which is quite remarkable. The woods and groves which were silent until recently are now resonant with bird-song.

A memorandum was drawn up by Lord Onslow, late Governor of New Zealand, for the preservation of native birds in that colony by setting apart two islands for the purpose. One, Hauturn Island, which contains an area of about 10,000 acres, rising in the middle of an elevation of about 2,000 feet, was selected. There are no egg-destroyers in the island, such as the Wika Rail, nor wild pigs, which eat the young of the Mutton bird.

Our attention naturally turns to the birds which have been extirpated in modern times, of which the Dodo is the most remarkable They were found in the Mauritius by the Portuguese in the beginning of the 16th century. Owing to their inability to fly and unwieldiness they soon succumbed. A quantity of Dodo's bones were found in that island in a peat bed and sent to Europe. They have been described in detail by the late Sir Richard Owen. These bones showed nearly every part of the osseous structure of the bird. A bird allied to the Dodo was found in the Island of Bourbon. The Solitaire is also extinct, and another species from the neighbouring island of Rodriguez, two species of Parrot, a Dove, a large Coot, and a flightless and long-billed Rail. The Great Auk, allied to the Razor-bill, whose remains are found in the kitchen midden of Denmark and in Caithness, seems to have become extinct since 1844, in which year the last two examples known to have lived were taken off the south-west point of Ireland. Ten years before one had been taken alive at the entrance of Waterford Harbour, and in 1841 one was taken near St. Kilda. Far less commonly known is the *Labrador Duck*, allied to the Eider Duck, which 50 years ago was found in summer about the mouth of the St. Laurence, and the coast of Labrador, migrating in the winter to the shores of Nova Scotia and New Brunswick, &c. The last known to have been killed was in Halifax Harbour in 1852. The Spoonbill, the

Crane, the Great Bustard, and the Capercail, once bred in England. The latter has been lately introduced from Sweden into Scotland and is doing well. It is worthy of remark that all the four species were protected by Acts of Parliament with regard to their eggs only, leaving the parent birds in peril of their lives during the period of incubation. The Chough, which frequented our cliffs in some numbers fifty years ago, is now extinct in this country. The Kite and Hen Harrier, which were both denizens here, only visit us occasionally from the continent.

I must say a few words about our meteorological returns, which show some cause for suspicion that they are not always taken with sufficient accuracy, partly owing, perhaps, to the position and environments of the rain-gauges, which should be perfectly level and of a sufficient height above the surface to ensure the reception of every drop of rain. Of course two gauges near each other will show a slight discrepancy in the annual fall, as a thunderstorm will pass over one while the other will escape. General Pitt Rivers' accurate observations at Rushmore and Larmer show this, but the difference only amounts to a very small decimal fraction during the year. Some of the discrepancies, however, in the meteorological sheet of the new volume of the Proceedings of the Club cannot be accounted for in this way.

An Old Hampshire Manor House on a Byeroad to History.

By FREDERIC FANE, Esq.

To any one descending from the West side of the plateau of the New Forest into the valley of the river Avon, by a cart track from Bratley Wood, to the parish of Ellingham, Moyle's Court is seen at the end of a vista, through the woods. A dark coloured brick mansion, its colour mellowed by more than three hundred years' exposure—the very high pitched roof is more that of an old French Château, than of the houses to which we are accustomed in this district.

Mr. Shore, who has ably written upon the antiquities of Hampshire, states that the word "court" as applied to many of the old manor houses in this country, refers without doubt to the former owners of the estate and the courts held to record the manorial rights attached to its possession. William de Solariis, the founder of the Priory near here, must have been Lord of the Manor about a century after the time of the Conqueror. The next possessor was Robert de Punchardon, whose family from the time of Richard I., for several centuries, held this manor. In the reign of Edward II. (*circa* 1310), John de Moelles held

Ellingham, and another of the same name in 2 Edward III. The next owner recorded is Florencia de Punchardon, in 19 Edward III., and several of that name held the manor in quick succession till 1392, when we first meet with the name of Moyle's Court, and "Ellingham Manor vocat. Meoles," was held by Wm. de Botreaux. There appears to have been an intermarriage between the Punchardons and Botreaux families, and the manor passed from one to the other of these names. To the before-named William de Solariis probably belongs the ancient altar-tomb in Ellingham churchyard, which is, no doubt, of the same date as the chancel of the church, probably built towards the end of the twelfth century. The name Moyle is still very common among the humbler denizens of this district, and is the same as Meoles (probably pronounced Moyles), who held the manor early in the 14th century.*

In the 16th century Moyle's Court, with the parish of Ellingham, was in the possession of a family of the name of White. A daughter, Alice, of that family, having married William, a son of William Beconsaw, took the estate into that family. Of that marriage there were three children, of whom one was knighted in 1627 and became Sir White Beconsaw. At his death the Moyle's Court Estate was divided between his daughters, Elizabeth, wife of Sir Thomas Tipping, and Alicia, wife of John Lisle.

Having thus traced the early history of the estate attached to Moyle's Court we may return to the house itself and the more immediate circumstances which have attached an historical interest to the place and connect it so closely with the short, but tragic episode, of Monmouth's rebellion and the deeds of horror perpetrated by Jefferies, the echoes of which are still heard throughout the Western Counties. The old Manor House itself, formerly much larger than it now is, was probably surrounded with moats, traces of which still exist, on its two sides, and a brawling forest brook runs near the house, which would give an ample supply of water

* For the above, relating to the descent of the property, I am indebted to Mr. T. W. Shore, F.S.A.

for defensive purposes. Lying in a very secluded position, at the edge of the forest, surrounded by moors and woods, and far from any main roads, Moyle's Court must have been a locality well suited for adventure and intrigue. Smuggling was formerly rife in this district, and the scenes so graphically described in the well-known novel, "Smugglers and Foresters," the plot of which is laid in the New Forest, might well have occurred at this place.

Some mansion, of earlier date than any portion of the present building, without doubt, existed upon the same site, as fragments of stonework, with rude carvings and arched doorways, may be seen in the cellar and other portions of the premises, of a date as early, or probably earlier, than that of Henry VII.

John Lisle, who had married Alicia Beconsaw, the heiress of Moyle's Court, occupies a somewhat prominent place in the history of the Commonwealth. Colonel Lisle, although his name does not appear as one of the signatories upon the death warrant of Charles I., is reputed to have been responsible for that document, being one of Cromwell's Privy Council, and as such is styled "Lord Lisle" in Burnet's History.

In a tract, printed in 1660, entitled "The mystery of the good old cause briefly unfolded," is a catalogue of such members of the late Long Parliament, that hold places both civil and military, contrary to the Self-Denying Ordinance of April 3rd, 1645. John Lisle is described "as Barrister of the Middle Temple, Master of St. Crosses in Dr. Lewis' place (St. Cross Hospital, near Winchester), being a place for a divine with £800 a year, one of the Lords Commissioners of the Great Seal worth £1,500 per annum, one of the King's Judges, afterwards became a Cromwellian, and swore Oliver at his first installing Chief Magistrate. He was President of the High Court of Justice (so called) which tried Sir Henry Slingsby, Dr. Hewit, &c., for treason against the Protector, and passed sentence of death against them.

At the Restoration, the Spirit of Revenge, which caused the exhumation of the body of Ireton and other Roundheads who had been prominent in the affairs of the Commonwealth, caused the

Proclamation of Parliament—"That the Council of State, do forthwith take order, for stopping all the ports, to the end, that none of those, who are ordered to be apprehended, as having sat in judgment, upon the late king's majesty, may make his escape, beyond the seas." Among these persons occur the name of John Lisle and sixty-five others.

From Burnet's History, vol. iii., we read :—"That Lisle, went at the time of the restoration, beyond sea, and lived at Lausanne, where three desperate Irishmen, hoping by such a service, to make their fortunes, killed him, as he was going to church, and the assassins, being well mounted, and ill pursued, got into France. His lady was known to be much affected with the king's death, and not easily reconciled to her husband, for the share he had in it."

We do not know the date of this assassination, but Moyle's Court again comes into notice, when Alice Lisle, the widow of Colonel Lisle, was residing with her family on her estate there at the time of the Duke of Monmouth's ill-starred attempt to ensure the Protestant succession by landing in the neighbourhood of Charmouth, in Dorsetshire.

One of the sons of Dame Alice Lisle, as she was by courtesy styled as widow of one of Cromwell's Lords, was serving in the army of James II. at Sedgmoor, the first and last battle, which destroyed all hope of success to Monmouth's expedition, whose followers dispersed and fled in all directions, while he himself, probably endeavouring to reach Southampton and so to get beyond the seas, was taken not many days after the battle in a miserable plight in the parish of Cranborne at no great distance from Moyle's Court.

The battle of Sedgmoor took place on the 6th of July, 1685, and on or about the 25th of that month a messenger from Warminster, named Dunn, arrived at Moyle's Court to ask Dame Alice if she would receive and shelter one Hickes, whom she believed and stated on her trial to have only been amenable to the law for preaching as a Nonconformist. Whatever may have been the reply of Dame Alice to this request Hickes, of Keynsham, near Bath,

and another fugitive from the field of Sedgmoor named Nelthorpe, accompanied by the messenger Dunn, appear to have made their way across from Warminster, through Deverill, Chilmark, Sutton, Fovant, and Chalk, to Martin, on the borders of Wiltshire, where they were entertained by a Mr. Fane. It would appear that Dunn had arranged with Colonel Penruddocke, on the part of the authorities, to waylay and arrest the party at some point on the road, but for some reason, possibly with the design to implicate Dame Alice, he deferred any interference until they were safely housed at Moyle's Court, one Barter acting as guide.

Crossing the river Avon at Fordingbridge they reached their destination about ten o'clock at night on the 28th of July, and, having turned their horses loose at the gate, they were taken into the house by the steward of Dame Alice. It appears, however, that they had but a very short interview with the owner of the mansion in an upstair room, where they supped.

According to Burnet—"She knew Hickes, and treated him civilly, not asking from whence they came, but Hickes told, what brought them thither, for they had been, with the Duke of Monmouth. Upon which, she went out of the room, immediately, and ordered her chief servant, to send an information, to the next justice of the peace, and in the meanwhile to suffer them to make their escape." During the night, however, Moyle's Court was surrounded by Colonel Penruddocke and some soldiers, and Hickes and Nelthorpe were found secreted, the one in the malthouse and the other in one of the chambers near that in which they had supped; and, being both taken, they were subsequently hung at Glastonbury. John Hickes is styled clerk, but he was probably a dissenting minister. Nelthorpe was a lawyer who had been concerned in the Rye House plot.

For this offence Alice Lisle was at once conveyed to Winchester, on a pillion behind a trooper, and when the writer came to Moyle's Court about 1872 the old people at Gorely, a short distance on the road towards Winchester, used to tell how that their ancestors had handed down that the horse having cast a shoe at that place Alice

Lisle, being surrounded at the forge by her sorrowing tenantry, had said "Weep not, good folks, I shall soon return to you," at which the soldier grumbled out "Yes, you will, but with your head left behind."

The infamous George Lord Jefferies had just arrived at Winchester to open his commission, for what was afterwards called the Bloody Assizes; and from the commencement of the trial of Alice Lisle it was evident that nothing would satisfy the judge but the conviction of the prisoner, whatever the evidence might be.

Burnet says—"That he was resolved to make a sacrifice of her, and obtained of the king, a promise, that he would not pardon her, which the king owned to the Earl of Feversham, when he, upon the offer, of one thousand pounds if he could obtain the pardon, went, and begged it." Instead of leaving the examination of the witnesses to the counsel for the crown, Jefferies took an independent position, and examined the witnesses himself, and so browbeat and worried them, that they contradicted themselves in any way that the Chief Justice desired. Some idea of his cruelty and his ferocious blasphemy, may be gathered from his treatment of the witness Dunn. It must be remembered that Lord Jefferies was a man of most notorious profligacy.

The Lord Chief Justice to Dunn—"Why, thou vile wretch, didst thou not tell me just now, that thou pluck'st up, the latch? Dost thou take the God of Heaven, not to be a God of Truth, and that He is not a witness of all thou saith? Dost thou think, because thou prevaricatest, with the court here, thou canst do so with God, above, who know'st thy thoughts, and it is infinite mercy, that for those falsehoods of thine, he does not immediately strike thee into hell? Jesus God, there is no sort of conversation, nor human society, to be kept, with such people, as these are, who have no other religion, but only its pretence, and no way to uphold themselves, but by countenancing lying, villany, &c." Again: "A Turk, is a saint, to such a fellow, as this, nay, a pagan, would be ashamed to be thought, to have no more truth in him. Oh! Blessed Jesus, what an age do we live in, and what a generation

of vipers, do we live among. Sirs, is this what you call the Protestant religion? Shall so glorious a name, be applied to so much villany and hypocrisy? Is this the pursuasion, you hope to live and die, and find salvation in? Will you, any of you, gentlemen, be contented to die, with such a lie in your mouth, &c.?"

"Jesus God, was there ever such a fellow, in the world, as thou art? Prithee, let me ask thee, once again, Dost thou believe there is a God, that this God is spotless, truth, and purity, itself? Dost thou believe, that thou hast a precious and immortal soul, that is to live, in everlasting bliss, or eternal misery, after this life, according, as thou carriest it here, &c.? Thou wretch, all the mountains, and hills in the world, heaped upon one another, will not cover thee, from the vengeance of the great God, for this transgression of false swearing. What hopes, can there be, for so profligate a being, as thou art, that so impudently, stands, in open defiance of the omnipresence, omniscience, and justice of God, by persisting, in so palpable a lie, &c.?"

The unfortunate witness was so bewildered by the torrent of abuse from the mouth of the Lord Chief Justice, that at last he bursts out, "My Lord, I am so baulked, I do not know what I say myself: tell me what you would have me to say, for I am cluttered out of my senses."

Dame Alice Lisle called no witnesses, but made defence as follow:—

"My lord, that which I have to say is this, I knew of nobody coming to my house but Mr. Hickes, and as for him, I did hear that he did abscond by reason of warrants that were out against him for preaching in private meetings, but I never heard he was in the army, nor that Nelthorpe was to come with him, and for that reason, it was, that I sent for him to come by night, but for the other man Nelthorpe, I never knew he was Nelthorpe, I could die upon it, nor did know what name he had till after he came into my house, but as for Mr. Hickes, I did not in the least suspect him, that he had been in the army, being a Presbyterian Minister, that used to preach and not to fight. My lord, I abhorred both the

principles and practices of the late Rebellion. Besides, my lord, I should have been the most ungrateful person living should I have been disloyal, or acted anything against the present king, considering how much I was obliged to him for my estate."

"My Lord, had I been tried in London I could have had my Lady Abergavenny and several other persons of quality that could have testified how much I was against the rebellion, and with what detestation I spoke against it during the time of it, for I was all that time in London, and staid there till after the Duke of Monmouth was beheaded, and if I had certainly known the time of my trial in the country, I could have had the testimony of those persons of honour for me. But, my lord, I am told, and so I thought it would have been, that I should not have been tried as a traitor for harbouring him, till he was convicted for a traitor. My lord, I should take my death of it, that I never knew of Nelthorpe coming, nor anything of his being Nelthorpe, I never asked his name, and if he had told it me I had then remembered the Proclamation. I do assure you, my lord, for my own part I did abhor those that were in that horrid plot and conspiracy against the king's life. I know my duty to the king better, and have always exercised it. I defy anybody in the world that ever knew the contrary, to come and give testimony as to what they say of my denying Nelthorpe to be in the house; I was in great consternation and fear of the soldiers, who were very rude and violent, and could not be restrained by their officers from robbery and plundering my house, and I beseech your lordship to make that construction of it, and I humbly beg of your lordship not to harbour an ill opinion of me because of those false reports that go about of me relating to my carriage towards the old king, that I was anyways consenting to the death of King Charles the First, for, my lord, that is as false as God is true. My lord, I was not out of my chamber all the day in which the king was beheaded, and I believe I shed more tears for him than any woman living did, and this, the late Countess of Monmouth, and my Lady Marlborough, and my Lord Chancellor Hyde, if they

were alive, and twenty persons of the most eminent quality could bear witness for me, and I do repeat, my lord, as I hope to obtain salvation, I never did know Nelthorpe, nor never did see him before in my life, nor did I ever know of anyone's coming but Mr. Hickes, and him I did know to be a Nonconformist Minister, and there being as is well-known warrants out to apprehend all Nonconformist Ministers, I was willing to give him shelter from these warrants ; I was come down but that week into the country, when this man came to me from Mr. Hickes, to know if he might be received at my house, and I told him if Mr. Hickes pleased, he might come upon Tuesday, in the evening, and should be welcome ; but withal, I told him I must go away the Monday following from that place, but while I staid, I would entertain him, and I beseech your lordship to believe I had no intention to harbour him but as a Nonconformist, and that I knew was no treason. It cannot be imagined that I would venture the hazard of my own life, and the ruin both of myself and my children, to conceal one that I never knew in my life, and I did not know Mr. Nelthorpe, but had heard of him in the Proclamation. And for that white-headed man that speaks of my denying them, as I said before, he was one of them that rifled and plundered my house, and tore open my trunk, and if I should not be convicted, he and the rest of them may be called to account for what they did, for they ought not to have meddled with my goods, besides my lord, I have a witness that can testify what Mr. Nelthorpe said when he was examined, before I staid in London till all the Rebellion was past and over, and I never uttered a good word for the rebels, or ever harboured so much as a good wish for them in my mind. I know the King is my Sovereign, and I know my duty to him, and if I would have ventured my life for anything, it should have been to serve him. I know it is due, and I owed all that I had in the world to him, but though I could not fight for him myself, my son did ; he was actually in arms on the king's side in this business ; I instructed him always in loyalty, and sent him thither ; it was I who bred him up to fight for the King."

The Lord Chief Justice charged to the utmost against her, and three times refused to take the verdict of the Jury—in her favour—until they obeyed his mandate, and found her guilty, when he immediately passed sentence upon her, condemning her to be burned the same day. "During the passing of the sentence," says Burnet, "the only person not concerned, was the lady herself, who was then past seventy, and was so little moved at it, that she fell asleep." Petitions were at once forwarded to the King, especially by her friends, the ladies St. John and Abergavenny. Strong intercession was also made by many of the nobles and others about the Court, but in vain, and the only indulgence shown by James was, that in accordance with her own petition, instead of being burnt, she should be beheaded, which sentence was carried into effect in the Market Place, at Winchester, on Wednesday, the 2nd of September, 1685. After the execution, the body was brought back to Moyle's Court, and interred in the Churchyard, at Ellingham.

The whole of Dame Alice's property was at once confiscated as that of an attainted felon, but it is clear that the whole process against her was illegal. The men she took in for the night had never been tried for any offence, and were therefore, according to law, innocent. That her conduct was not a treasonable offence, has been argued at length, by Lord Macaulay.

However, a few years later, on the petition of her daughter, Tryphena, wife of Richard Lloyd, and of Bridget Ussher, the attainder was reversed, and the property restored to the Lisle Family by Act of Parliament, dated William and Mary, 1689.

Whereas Alicia Lisle, widow, in the month of August, in the first year of the reign of the late King James the Second, at a Sessions of Oyer et Terminer, and Gaol Delivery, holden for the County of Southampton, in the City of Winchester, in the said County, by an irregular and undue prosecution, was indicted for entertaining, concealing, and comforting John Hicks, Clerk, a false traitor, knowing him to be such, though the said John Hicks was not at the trial of the said Alicia Lisle, attainted or convicted of any such

crime ; and by a verdict, injuriously extorted and procured by the menaces and violences and other illegal practices of George, Lord Jefferies, Baron of Wem, then Lord Chief Justice of the King's Bench, and Chief Commissioner of Oyer and Terminer, and Gaol Delivery within the said County, was convicted, attainted, and executed for High Treason : May it therefore please your Most Excellent Majesties at the humble petition of Tryphena Lloyd, and Bridget Ussher, daughters of the said Alicia Lisle : That it be declared and enacted, by the authority of this present Parliament, and be it enacted, by the King and Queen's Most Excellent Majesties, by, and with the advice and consent of the Lords, Spiritual and Temporal, and Commons in this present Parliament assembled, and by the authority of the same : That the said conviction, judgment, and attainder of the said Alicia Lisle be, and are hereby repealed, reversed, made, and declared null and void to all intents, constructions, and purposes whatever, as if no such conviction, judgment, or attainder had ever been had or made, and that no corruption of blood, or other penalty, or forfeiture of honours, dignities, lands, goods, or chattels be by the said conviction or attainder incurred, any law, usage, or custom to the contrary, notwithstanding.

The Property attached to Moyle's Court, consisting of the Parishes of Ellingham and Ibbesley, and extending from Ringwood to within a short distance of Fordingbridge, and from the Crown Lands of the New Forest to the river Avon, remained in the family of the Lisles until the beginning of this century, when, upon the death of Mr. Charles Lisle, the estates were sold to the owner of the property on the other bank of the river, and with it passed into the hands of the Earl of Normanton, whose son is the present possessor.

When the present occupier and writer of these notes came to Moyle's Court about twenty-four years ago, the house had been uninhabited for nearly half-a-century, and the architects called in had given their opinion that nothing could be done with the place but pull it down. A great part of the old house had been already

destroyed. The cellars were full of water into which the floors had fallen, the windows, or rather the spaces where they had formerly been, were boarded up, the whole place a prey to the spoiler. When bricks were required a room was pulled down ; when a fire wanted lighting a floor was ripped up, or a panel was broken down. The house was given up to the bats and owls. The latter resented interference strongly, and long after the house was again inhabited, screamed and hooted down the broad old-fashioned chimneys, till they made night a terror.

With patience and care, the house is now restored as nearly as possible as it can be, in the same style in which it originally stood. Some carvings and panellings, said to have been in the Chapel attached to the house, have been restored to the walls. The old ponds and moats have been cleared of mud, and the gardens restored to their legitimate uses, and inquisitive seekers may still be gratified by a sight of the hole in which were found, according to tradition, the unfortunate fugitives from the battle of Sedgmoor, and the history, and sad fate of Alice Lisle, will it is hoped be preserved in connection with the old house on the borders of the Forest for many generations.

Ellingham Church.

By FREDERIC FANE, Esq.

ALTHOUGH very small, the picturesque church of Ellingham is of interest both for its venerable appearance and its connection with the History of Alice Lisle, who is here buried, which you have already heard.

The church was probably built somewhere about 1230, as we find no Norman remains in or about the church that I am aware of, the earliest features of the church being Early English in character.

At that time, that is in 1163, it was given by William de Solariis to the Abbey of Saint Sauveur le Vicompte in Normandy, between Cherbourg and Bayeux, from which its duties were probably served, and which was under the protection of John Chandos, to whom the estate there was given by Ed. III.

The tombs which you will see on the floor of the Chancel belong probably to the Friars, who came from Normandy to serve in this church until the suppression of the alien Priories by the 3rd Henry V. in 1414. The tithe was given by Henry VI. to Eton College.*

* We learn from Domesday Book that Cola, the King's huntsman, held this manor in the time of King Edward, probably a great forest official, but there is no mention of a church.

It is possible, or rather probable, that the altar tomb near the South Porch is that of the founder, William de Solariis.

I would here remark how singular it is that all traces of habitations, such as would have encouraged the building of a church, should have completely vanished from its immediate neighbourhood, as one farmhouse is now the only building for nearly three-quarters of a mile.

In the year 1746 a spirit of renovation fell upon the churchwardens of Ellingham, who proceeded to pull down the West End of the church and rebuild it, in what I may term "Mausoleum Gothic;" substantial, certainly, but pretty, certainly not. The present South Porch, with its sundial, was erected of the same style of architecture and at the same time.

The bells, of which there were two, were sold for £37, weighing about 8cwt. and a-half, and the proceeds possibly invested in the Communion plate. You will observe the remains of a fine yew tree, as is so common, close to the old gateway of the churchyard. Why?

The church, having no foundation, as is common in very early churches, was in a very dilapidated state, when its restoration was undertaken by the Earl of Normanton about ten years ago, and carried out in a most satisfactory manner.

If the leading principle of this restoration had been in all cases adhered to, in many of the so-called restorations of the last fifty years, we should not have to deplore the loss of so many objects and buildings of the greatest archæological interest.

In this case the idea was to destroy nothing that could be preserved "bearing upon the past history of the building," and I would advocate one matter in connection with all church restoration as was faithfully carried out in this instance—viz., not to cart away the memorials of the fathers of the parish from the church floor, to fill their places with modern encaustic tiles to the benefit of contracting masons. Here every flag stone was carefully marked and restored to the precise places where old priest and peasant alike sleep their last sleep.

Attached to the exterior of the nave is a building which contains the staircase to the rood-loft, with the usual door communicating with the interior of the church.

In the restoration works, the rood-loft, which is, I believe, practically as intact as in pre-Reformation times, was not interfered with, though the plaister work as now seen was probably erected to carry the Lord's Prayer and Commandments, according to law, at the date you see, 1671. You will remark upon the ancient screen, the stand for the hour glass, which has itself, I regret to say, disappeared. The chancel, which was of Early English work, was mostly, so far as the outer walls are concerned, rebuilt; but one of the windows on the South side is original, that is of Perpendicular work. The East window, coeval with the oldest part of the church, was from 1746 to 1883 blocked up by the erection which you will see placed against the West wall of the church.

In the corner of the chancel, within the altar rails, is a brass to one of the Punchardon family, who held this manor in the period between 1310 and 1392, or later.

In the vestry are some ancient bosses from the roof and rafter supports of the old church.

I would now draw your attention to the facing of the rood-loft and its old lettering of the Lord's Prayer and Commandments with the accompanying texts. After hearing, as you have done to-day, the sad story of Alice Lisle, it has often struck me that there is a singular coincidence between the choice of the texts wherewith to adorn this screen, which were probably painted by her order, and bearing the date 1671 and her own fate sixteen years later.

You will see one of these texts read "My son, fear God and the King, and meddle not with them that are seditious;" in our authorised version "with them that are given to change." Either reading is significant. The former is taken from the Geneva Bible.

The pulpit, of probably the time of James I., is the one which was always in the church.

The four-post pew formerly appertaining to Moyle's Court was

built in 1712, and has been moved several times. How aptly fits the quotation from Swift's Baucis and Philemon—

> "A bedstead of the ancient mode,
> Compact of timber many a load,
> Such as our ancestors did use,
> Was metamorphosed into pews,
> Which still their ancient nature keep
> By lodging folks disposed to sleep."

The erection in front of the West door was, previous to the restoration of the church, in front of the east window, which it completely blocked. It was probably erected by Lord Windsor, who appears to have lived at Moyle's Court for four or five years about 1746, and is a very good example of the heavy carving of that date of the school of Grinling Gibbons. It was made as a setting for the curious Flemish picture on panel of the Last Judgment painted on panel, 1558 to 1617, by Paul Goltius A. Fleming. It is reputed to have been taken from a small oratory on board of a Spanish man-of-war, captured by a ship of which Lord Windsor was in command at the action at Port St. Mary, near Cadiz, at that period.

The Registers, the old ones being in very bad preservation, begin with—

Marriages.	Baptisms.	Burials.
1596 to 1649	1602 to 1653	1596 to 1616

The churchwardens' accounts commence in 1544. In one of the old account books is written "a special licence, dated February 19th, 1634, and 2nd year of his Grace's translation (Arch. Laud), by William, Lord Arch. of Cant., and confirmed by letters patent of our Lord Charles the King (I.) to White Beconsaw, the owner of Moyle's Court, and Dame Edith, his wife, to eat flesh in the days prohibited by the law of the land," for which they are to pay yearly to the poor of the parish 13s.

The church plate consists of a very interesting Chalice of Cromwell, 1652.

Engraved H. T. W. O. C. W.

1698

A heavy flagon and paten of massive silver, both dated 1742.

The only object remaining to be remarked is the altar tomb of the Lisles exterior to the south side of the nave. On it is engraved the date of Alice Lisle's death and that of one of her daughters.

It has been at various times repaired at the expense of Mr. Aimbrose Lisle Philips, a descendant of Alice Lisle.

Near the gate is a tombstone, which has attracted some attention, having been brought here by gipsies a hundred years ago. The inscription is not decypherable, but upon it is a symbol of death, common in the Catacombs of Rome. It is the Greek "θ" for "θάνατος" (within a circle).

On the Desirability of A Photographic Survey of the County.

By the Rev. T. PERKINS.

AMONG the members of the Dorset Natural History and Antiquarian Field Club there are doubtless many who practice the charming art of photography. I notice in the list of members the name of more than one of those who are also members of a very useful little society with which I am officially connected, the Dorset Amateur Photographic Association, and I am quite sure that there are many who have abundant leisure, and who, if they would but turn their attention to photography, would be sure to succeed so far, at any rate, as to be able to do really useful work, and work that would be of the utmost interest to a society like that which I have the honour of addressing this evening. What I have to say will be practical; the art side of photography will not occupy our attention on the present occasion.

I will first briefly point out what is required, and then will give you a sketch of how the work may be done. It is a work that has been undertaken in several counties already, but I have not heard of any organised attempt being made to do it in Dorset.

No one can visit, as you do, various parts of the country without being struck by the fact, whether you deplore it, as I do, or not, that year by year the antiquities of the country are disappearing before the march of civilisation and the hands of the so-called restorer and improver. Well, no doubt from a sanitary point of view it may be desirable that some, nay, many, of the picturesque old cottages with their grey stone walls and overhanging thatch, low ceilings, and general atmosphere of damp and decay should be pulled down, and as the nineteenth century is an eminently practical one, and cares little about art, but desires cheapness, trimness, comfort, and smartness, it is not surprising that cottages of two or three types, all showing little real love for art or delight in the beautiful, should take their place. We have first the box-like building with its slate or tiled roof, underneath which the upper rooms are like an oven in summer, and through the interstices of which the powdery snow is driven in winter ; then we have the sham half timber houses, many of which may be seen in model villages about Shaftesbury ; and, again, we have larger houses, shops with pretentious stucco-covered walls, of which examples may be seen in this town, occupying sites which in my own memory could boast of houses which were a joy to behold. Then we see year after year old churches putting on a new appearance under the restorer's hands, walls scraped, plaster removed, old woodwork destroyed, pews and pulpits swept away, ceilings torn down to make way for open timber roofs, organ chambers and vestries, often most hideous excrescences, run out, not unfrequently necessitating the removal of good old work to make room for them ; and, worse than all, conjectural restoration of what the architect imagines was once to be found in the building, lifeless imitations in the 19th century of features that once were full of the vitality of the builder's or carver's soul. It is, I think, one of the duties of an antiquarian society to protest against the wholesale destruction which is going on around us ; but I know from bitter experience that the protests often fall on unheeding ears, and gain for the prophets of art the character of crack-brained enthusiasts. Now, it seems to me that if we

cannot check the current that will soon destroy all the valuable work of past ages yet remaining to us, we may at any rate endeavour to secure some record, accurate and permanent, of what these things were like before the touch of the destroyer came upon them. This can be best done by photography. A photograph is worth much more than any drawing ever is from the standpoint from which I am regarding it—namely, as an absolutely truthful and accurate representation of existing facts ; that is, if the photographer is careful to use suitable lenses and to select good points of view.

Next we see old-world habits and customs passing away, the smock frock of the rustic giving place to the shoddy jacket or the fashionable broadcloth. Village life is changing, the maypole is now seldom seen, the fairs are shorn of their ancient glory, the harvest home has given way to the thanksgiving service, and, perhaps, many evils die with these old things, and the changes are changes in many cases for the better ; but yet I, for one, cannot see them disappear without regret. I know that one distinguished member of your club, whose name is now known wherever English books are read, and whose novels have taken the foremost place in modern literature, has done much, and is doing much, to depict with his graphic pen the habits and characters of Wessex folk in present and recent times. His books are photographs, so to say, in words ; but I should also like to see photographs in permanent platinum salts of such men and women as Gabriel Oak with his sheep on the Downs, Tranter Dewy with his hogshead of cider, Old William with his bass-viol, pretty fickle Anne Garland at the mill, noble John Loveday in all his bravery, Old "Sir" John with his maudlin boasts about his lead-coffined ancestry at Bere Regis, and poor pure Tess among the cows on the dairy farm, or hacking swedes on the bleak hills of central Dorset. And it is not too late even now to get some such pictures, though I fear the days of grace are but few. Again, much valuable work may be done by photography to geology. And I presume this science comes within the scope of the Dorset Field

Club. Every one knows how the various agencies of Nature, frost and snow, rain and wind, river and sea, are altering the appearance of the land; here old rocks are worn away, here new land is being built up of materials brought from some other place. We are apt to look upon the rocks as unchanging, and to speak of the everlasting hills; but a few years' observation will show how true are the words of our scientific poet when he says:—

> "Nothing stands;
> They melt like mist the solid lands,
> Like clouds they shape themselves and go."

And now and again there are chances of securing valuable records, a landslip may for a time lay bare the heart, so to say, of some sea cliff or inland escarpment, the stratification is distinctly shown, which, in a few years, Nature, ever ready to heal her wounds and cover her scars with garments green, will hide away from human eyes once more; or a new railway cutting may in like manner show some interesting formation which will, before long, be similarly covered by a sheet of turf even if in the course of the work its features are not lost. With reference to this point I may quote a few words from a letter I received a few days ago from one of the members of this society, Captain Marshall Hall. He says:—"I have several negatives of clay diggings in the Bagshott sands, and notably the cutting for the new railway near Hamworthy, now destroyed in so far as the excellent exposure goes, and therefore not capable of being photographed again."

At times, too, special excavations are made on the occasion of the visits of societies, such as your own, to interesting places. I have read in your annual volumes of chalk pits yielding before the eyes of members their store of human bones and other relics of bygone races. Would not a photograph of such discoveries greatly add to the value of your investigations, and to that of the book in which they are described? Drawings, no doubt, if properly done, are of high scientific value; but every one cannot draw, and artists are prone to idealise Nature, seeking often to produce a picture

rather than a bare record of facts. Now, if a photograph is taken by anyone who understands what he is about, a truthful record is secured, and by mechanical means copies are easily and cheaply produced, for process blocks can be made capable of being printed with the letter press, the cost averaging about 1s. 6d. per square inch of the block. Objects of interest are often shown at your meetings, sometimes papers on them are read; these might well be illustrated by process blocks from negatives. But I think I have said enough to show you that there is plenty of work to be done, some of which wants doing immediately, as the time for doing it will pass away to return no more.

There are many who could undertake this work, photographers already who fritter away their time spoiling plates by taking photographs which are absolutely of no value, scientific or artistic, their ambition being satisfied if they got nice crisp, clear, sharp negatives, in which, even if the subject has the capabilities of making a good picture, all pictorial effect has been lost by want of artistic taste on the part of the photographer, or it may be they simply photograph again views that have been photographed a hundred times already. Others there are, it may be, who are working or getting valuable pictures without knowing their value; some possibly do their own district thoroughly, but no advantage to any, save to themselves, is derived from their work. Organization is required, systematic work is needed; by co-operation alone thoroughness can be hoped for. Now, it seems to me that sometimes societies do not do the work they might do, members join them because of the pleasant gatherings, such as this has been to-day, and the enjoyable excursion, such as we hope to have to-morrow; but these societies have an object beyond the mere social one, and should take a serious view of the chief object of their existence. Now, perhaps, it may be said that a photographic society is the one that should undertake a photographic survey of the county; but, unfortunately, all photographers are not antiquarians, or geologists, or scientific in the way that members of an Antiquarian and Natural History Field Club are. Many turn

their attention to the artistic side of photography alone. Whereas you are no doubt all deeply interested in some one or more of the branches of research which your club takes into its cognizance. All you have to do, then, is to learn how to take a negative, and to make a print from it. I can assure you these are not hard things to do. Photography, moreover, is not an expensive hobby; it is not one that entails much bodily labour if you confine yourselves to pictures of moderate size. And moderate sizes are all that in many cases are needed. You are widely scattered—east, west, north, and south—in the county, and if you, all or even a fair proportion of you, if you have not done so already, would take up photography and photograph what lies in your own district, in a very short time an admirable and valuable record of Dorset in its present aspect might be secured.

I would strongly advocate the sending out a request by the officers of the Society to each member asking if he or she would undertake photographic work for the Club, and, if so, what work; then, after answers have been received, some one with ample leisure should be appointed "Director" of the photographic section, and he should assign to each member a district in which he should work.

To assist the Director of the section a Committee should be appointed, drawn from different parts of the county; these should divide the county as equally as possible between them, taking each a certain number of quarter sheets of the six-inch ordnance survey maps. These should select the places to be photographed in their districts and hand over one or more quarter sheets of the map to each one who volunteers for the good work; the quarter sheet takes in an area of 3 miles by 2. Let these workers first survey the ground without their cameras, collect all the information they can about the history of the buildings and other objects they mean to photograph, and when they have thoroughly mastered all details and noted the best time for making exposures let them go over the district with their cameras and go again and again if necessary till they have got really good negatives. Then the work of printing

should begin, and here it is imperative that a permanent process should be employed, and there is one process, fortunately, the easiest of all to work after a little practice—namely, the platinotype process, which produces prints as permanent as the paper on which they are printed, that is, they are as lasting as any engraving can be. These should be sent to the Director unmounted, and he should have them mounted in albums which might well be the same size as the quarter sheets of the ordnance map, say about 22in. by 16in. In each album should be bound the quarter sheets of the ordnance survey of the district photographs of which it contains, and blank pages should be bound between the mounting sheets on which notes in MS. should be inserted, descriptive of the places pourtrayed on the opposite mount. Copies of the photographs taken should also be made in the form of lantern slides; these should be deposited with the Director of the photographic section and accompanied with notes. These could be arranged in sets and shown at winter meetings of the society, and explained by some one who, from the notes given by the original photographers, would undertake to compile a lecture.

The workers, I hope, would be so numerous and so widely distributed that nothing of interest would escape the notice of some one or other of those engaged in the photographic survey. If any geological section were exposed by natural or human agency it would be immediately photographed. There are, as perhaps you know, various sub-committees appointed by the British Association, which invite help in the way of photographic work The geological sub-committee would be grateful for prints of interesting geological discoveries; the meteorological sub-committee for photographs of clouds, snow drifts, lightning flashes, and other phenomena, and these sub-committees issue printed instructions explaining the way in which the work should be carried out.

Of course, as I mentioned, pictures of village and town life, of agricultural operations and various handicrafts, should be made, and these would form separate collections in special albums and boxes of slides.

If once such a survey could be set on foot, I have no doubt it would speedily progress, and I believe that many negatives already in existence might be available for the purposes indicated.

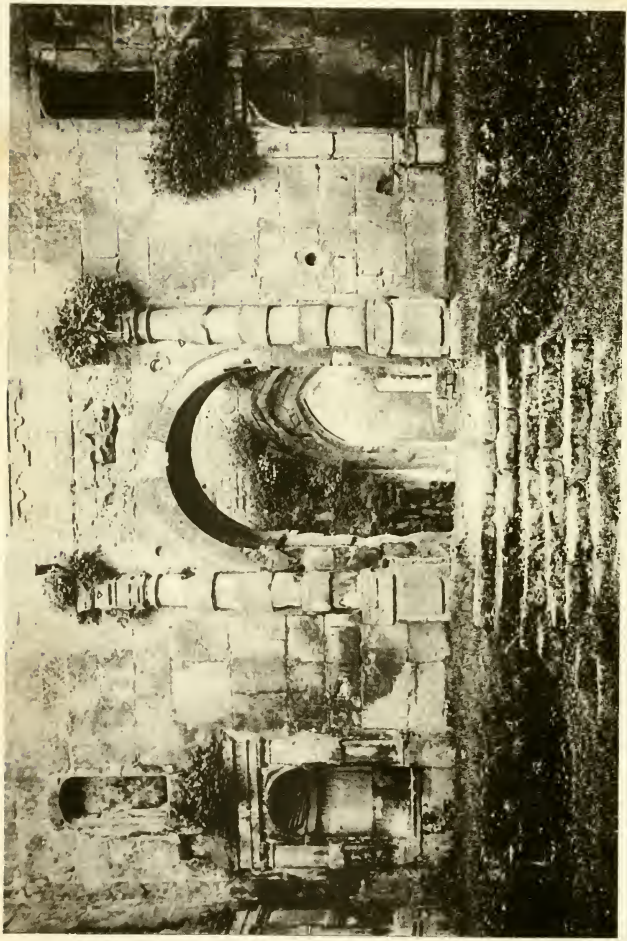
I have now detained you quite long enough, all I hope is that my remarks may bear some fruit. I have brought some photographs of spots of interest in the district, some of the best of which might be useful if the Society should really set to work to form a collection such as I have spoken of. I would only add that there is an Amateur Photographic Association in Dorset, whose officers, I feel sure, would only too gladly give advice on photographic matters to any who desire to begin or to carry on the work of photography in any of its branches, and would no doubt render valuable help to the Dorset Field Club.

A Sketch of the History of Old Wardour Castle.

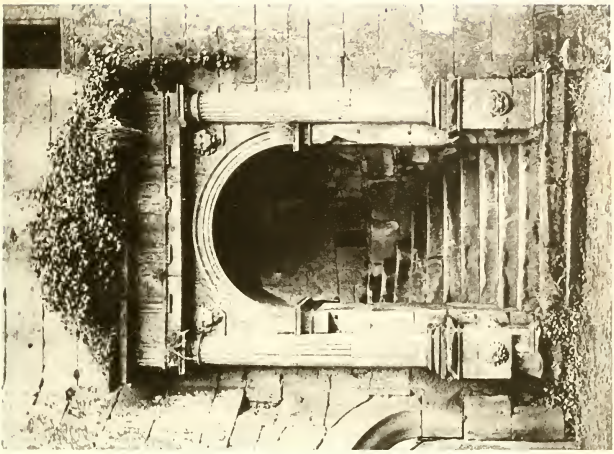
By the Rev. T. PERKINS.

WHEN I first suggested to your Hon. Sec. that it would be well to include Wardour among the places to be visited to-day, I hoped that you would have had the advantage of hearing a lecture on the history of this old castle from the present owner, Lord Arundell of Wardour, the living representative of the family which, with the exception of a few years, occupied the castle from the year 1545, until its destruction in the Civil War; but other engagements stood in the way of his preparing a paper, and therefore it has devolved on me to give you the necessary lecture on this occasion. But before commencing it I wish to express my thanks to Lord Arundell for kindly placing at my disposal books and manuscripts, which have been of great use to me in preparing the short account I am going to give you.

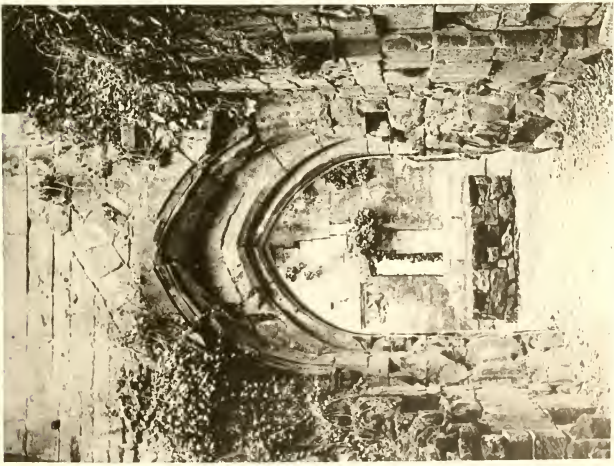
This is not a very ancient castle; it is not a large one, yet it is of great interest in more ways than one. First, architecturally. If you turn to that excellent work, Rickman's "Gothic Architecture," you will find the following note in the "Historical Appendix



1. Wardour Castle—The Main Entrance.



3 Staircase to the Banqueting Hall.



7 Wardour Castle. Entrance to Central Court

to the chapter on the Perpendicular English Style," A.D. 1392: —"Wardour Castle, Wiltshire, built by John Lord Lovell, as his manor house. The walls are nearly perfect, and very fine Early Perpendicular; they are unusually lofty, and quite contradict the popular idea that mediæval houses were always low."

The building belongs to a time when the early castle, built solely with a view to defence, was being developed into a dwelling house. You may see the earlier phase of a castle in the tower of London, the latest phase in New Wardour which we shall visit shortly. This building occupies an intermediate position, capable of being defended, if the need arose; it was yet built with an idea of comfort.

But not only architecturally, but historically, it is of interest. Its owners played their parts in history, and won for themselves renown, and these old walls themselves twice stood a siege in the days of the great Civil War, of which more presently. It was built in 1392, as we learn from the deed still in existence, dated the 16th of Richard II., granting to John Lord Lovell permission to build a castle on his manor of Wardour, in the county of Wilts. Let us pause a moment to consider the events taking place in England as these walls were rising.

The King had recently asserted his right to rule in his own person, and had freed himself from the control of his uncle, the Duke of Gloucester. John of Gaunt had at this time the chief influence over him. William of Wykeham had recently resigned the Great Seal, and, relinquishing the public life of a statesman, was turning all his energies to architecture, completing his college at Winchester, and remodelling the nave of his cathedral. The "Morning Star of Song" was still shining in its fullest radiance; it was a time of peace, or rather perhaps one should say a time when wars were lulled, a lull caused chiefly by the exhaustion of the nations; the peasant rising had been quelled, and the Wars of the Roses had not yet broken out; not yet had that memorable conversation between Norfolk and Hereford, as they rode together, occurred, leading to charges and counter-charges, well known to

every reader of Shakespeare, which gave the King an excuse for banishing both of these dangerous nobles; not yet was "this dear, dear land, dear for her reputation through the world . . . leased out . . . . . like to a tenement or pelting farm." Plenty of trouble was soon to fall upon the country, but for the time the king was reigning constitutionally, and the land had rest. One noteworthy act alone marks the year of the foundation of this castle—namely, the "Statute of Praemunire."

But to return to our immediate subject—the history of this castle. Built by Lord Lovell, as we have said, it remained in the direct line until the death of his grandson in 1454. We next find the castle in the hands of Lord Audley, to whom it was granted by Edward IV. in the first year of his reign; possibly the castle had during the troublous times of the Wars of the Roses been confiscated by the White Rose party. John Lord Audley died in 1491. Next, but how, I do not know, the estate passed to Thomas Earl of Ormonde, also Earl of Wiltshire, and he in 1498 sold the castle, manor, and park to Sir Robert Willoughby Lord Brooke. He by his second wife, daughter of Richard Nevil Lord Latimer, left three daughters, the eldest of whom married Sir Fulke Greville, and having inherited Wardour from her father, she and her husband sold the property to Sir Thomas Arundell, Knight, in 1545. You see, we now for the first time come across the name so intimately associated in our minds with the castle. And it will be now necessary to turn back and see who these Arundells were. It will be impossible for me to enter upon a complete family history, suffice it to say that they were an old West Country family, one of whom, Roger, is named in Domesday Book as possessing manors in Dorset and Somerset. In the reign of Henry III., by marriage, large estates in Cornwall came into the possession of Reinfred de Arundell; the chief seat of the family was at Lanherne, in the parish of St. Columbs. Inter-marriages of his descendants with the families of Chideock and Dynham and others added fresh estates to the family possessions. Now note this: John Lord Dynham, 5th Baron, married the daughter of Lord

Lovell, the builder of the castle, and one of their granddaughters married a Sir Thomas Arundell, whose son John was the father of two sons, the eldest of whom was Sir John Arundell of Lanherne, and the younger Sir Thomas Arundell of Wardour. Though this Sir Thomas was the first who resided in the county, his father Sir John had property in the Manor of Westbury, as may be seen from deeds in the muniment room at the new castle. This was an outlying part of the Chideock property which came to Sir John Arundell by marriage with the heiress of the Chideocks.

The Sir Thomas Arundell who in 1545 purchased, as we have seen, the castle which his ancestor Lord Lovell had built about 150 years before, did not live long to enjoy his new property. Those were dangerous times to live in ; recollect that that much over-praised monarch, Edward VI., ascended the throne in 1547, and the whole of his reign was a miserable time for England at large. The dissolution of the monasteries had caused untold miseries to the poor, and the king's youth gave opportunity for the intrigues of ambitious nobles, among whom the best known were the Protector, Duke of Somerset and uncle of the king, and Dudley, afterwards Duke of Northumberland, who also filled the office of Protector. It is a matter of English History how Somerset perished on the block, and Sir Thomas Arundell and two others falsely accused, as it seems, of a plot against Northumberland, were unjustly done to death in like manner in 1552. The Wardour property was then confiscated and conferred on Lord Pembroke, but in Queen Mary's reign the attainder was removed, and an arrangement made between Sir Matthew, the son of Sir Thomas Arundell, by which Wardour came back into the family, and has remained their's till the present day. Sir Matthew Arundell is recorded to have greatly embellished the castle. I think we shall be able to see some of his work to-day ; at any rate, the inscription over the entrance records the fact. He seems during part of his life to have let the castle to the Hyde family, and to have resided in a house in Shaftesbury, which has now disappeared. To him succeeded his son Sir Thomas Arundell,

born in 1560, who in 1579 obtained permission from Queen Elizabeth to travel on the Continent, and six years later to serve in the army of the Emperor of Germany. At that time the Turkish power extended to Hungary, and on August 13th, 1595, Sir Thomas at the siege of Gran slew the Turkish standard bearer, and carried off the standard. For this gallant deed the Emperor conferred on him the title of Count of the Holy Roman Empire. On his return to England he was shipwrecked, losing all the valuable jewels that the grateful Emperor had bestowed on him; ten years later he was created Baron of Wardour, and commanded the English forces sent to assist the Spaniards against Holland. He died in 1639 and was buried at Tisbury. He was succeeded by his son, another Thomas, who died of wounds received when fighting on the Royalist side near Bath. His death occurred at Oxford on May 19th, 1643. His wife is that Lady Arundell whose name is remembered for her spirited defence of this castle from April 30th to May 8th, 1643, against the besieging army of the Parliament. She had at last to surrender, and then the victors were themselves besieged, and after it had held out for a longer time the castle was re-taken by the Royalist army under the new Lord Arundell, who blew up part of the walls and rendered it impossible for it to be defended much longer. The castle ever since has been an uninhabited ruin, the family residing in a neighbouring house, now the farmhouse, which you can see to the left hand, until in 1776 the new castle commenced by the eighth Lord Arundell, six years earlier, was ready for occupation.

We must now turn to the two sieges of the castle during the Civil War. We have two accounts of the first siege. The Royalist one is given in detail, while Colonel Ludlow's is much briefer. For the second siege our chief authority is Colonel Ludlow, who in his memoirs gives us many interesting details which want of time will oblige me to pass over.

The story of the first siege is soon told. On Tuesday, May 2nd, 1643, Sir Edward Hungerford, commander of the Parliamentary

forces in Wilts, summoned the castle to surrender, saying that he had orders to search for men and arms ; but Lady Arundell, though she was about 60 years of age and had only 25 fighting men to defend it, refused to surrender. We are struck with admiration at her bravery when we remember that the besieging force numbered about 1,300. On Wednesday, May 3rd, the attack began, two small pieces of artillery only being employed, which did but little damage, though the firing, continued for six days, wore out the strength of the little garrison, as constant watching was necessary ; but the besiegers laid two mines in the vaults of the castle, one or both of which (for the accounts differ) they fired, doing but small damage, but proving to the garrison that they could not hope to hold out much longer. We can picture to ourselves the condition of the gallant little band of 25 against 1,300 ; the men so exhausted that they could hardly load their muskets, the women servants doing it for them, the lady of the castle rejecting all offers of quarter for herself and her daughter-in-law, the women servants, and the children, unless quarter were granted to the men also. But at last, on May 8th, honourable terms were offered, which she accepted. The lives of all were to be spared, the ladies were to be allowed to take with them wearing apparel and six serving men to wait on them wheresoever the Parliament should order them to live ; and lastly, the castle was to be safe from plunder. It is stated that the victors observed only the first of these three conditions, doing much wilful damage both to the castle and the park. The ladies and children were first carried to Shaftesbury and some of them afterwards to Dorchester.

Colonel Ludlow was then appointed by Sir Edward Hungerford to hold the castle for the Parliament, with a company of foot and his own troop of horse. Before long the Earl of Marlborough advanced towards Wardour as far as Fonthill, where he was met by a party of horse sent by Sir Edward Hungerford and was obliged to retreat. Colonel Ludlow then set about preparing himself to stand a siege ; he levelled the works he had erected against the castle, broke down the vaults about it, dug a well, and laid in a good

store of provisions. Within a fortnight the new Lord Arundell, who had come into the title by his father's death at Oxford, after he had heard of the loss of his castle, came and called on Ludlow to surrender. This he refused to do, and Lord Arundell, not being strong enough to begin an attack, withdrew for a time. As Ludlow was in great danger of being cut off from the rest of the Parliamentary army, he was granted permission to abandon the castle if he saw fit to do so; but this order only quickened his zeal for the cause, and he made use of the respite to procure ammunition from Southampton, and discovered some money which had been walled up by the late holders. This was, no doubt, an agreeable discovery to him; he expended part of it on his garrison, keeping a strict account for the Parliament. The enemy were now drawing near, and they managed to send a Shaftesbury boy, twelve years old, as a spy into the castle. The precocious young gentleman is said to have previously made an attempt to poison his grandfather, and was, so he afterwards said, whether truthfully or not I cannot say, employed by Captain White to find out the number of men in the garrison, poison the beer, the well, and the arms, to blow up the ammunition, and then to steal a horse to carry him back to Shaftesbury, for which services he was promised the enormous sum of half-a-crown. He was admitted to the castle, as his youth freed him from suspicion, and employed as a turnspit.

The enemy now appeared; the first notice of their coming was a stampede among the cattle. Ludlow and some of his men endeavoured to turn the cattle back and were attacked. Ludlow himself got into a hollow tree, but a bullet wounded him in the leg and kept him, he says, in bed two days. The next disaster was the bursting of a big gun in the castle roof. Some of the garrison now became suspicious of the boy, and a rope with one end round his neck and the other fastened to the end of a halbert made him confess. He said he had "poisoned" the gun that had burst and two others, but that his conscience had prevented him from poisoning the provisions. The "poison" for the cannon is

described as some red stuff made up in the form of a candle, with which he smeared the guns. Some oil, whether castor or not is not stated, was used as an antidote, and the sick guns became convalescent. The next event was a seizure of corn and other provisions on the way to Shaftesbury market, paid for at market price, to the no small astonishment of the owners ; then Captain Bowyer, or Bower, commanding the Royalists, offered any terms to the besieged if they would surrender, but they replied that they intended to hold out. The constant conversations between besiegers and beseiged, the advice given by the former to the effect "Now you had much better give up at once," the courtesy to each other displayed by these old combatants, sheds a pleasing and at times a humorous light on the narrative. I cannot go through the siege in detail. Captain Bowyer, shot by Captain Bean, died of his wound and Colonel Barnes was sent to take his place ; he raised a fort on the hill, in front of the castle, and occupied the outhouses, but sallies from time to time caused considerable loss to the besiegers. Negotiations ensued, Ludlow calmly offering, if not relieved within six months, to give up the castle on payment of £2,000 for the expense the Parliament had been at in keeping it. Of course the Royalists would have nothing to say to this. Provisions ran short, a captured horse was killed and eaten, the beer was all gone (these sturdy old Roundheads, you see, were no teetotallers, but they had to become water drinkers whether they liked it or not) ; but still they held out. A shot from the besiegers cut the portcullis chain, so that the besieged could no longer use their gate, and they barricaded it on the inside, so that the others might not use it. All other doors were walled up, and the only way of getting out was by a window. Attempts to undermine the walls were made, but molten lead, hot water, and hand grenades obliged the miners to abandon the attempt. The besiegers asked and obtained permission to carry off a wounded officer, and while this was being done, under cover of loaded muskets on the castle top, four men got out of a window and secured the provisions the miners had left behind them.

About the middle of January promise of relief came from Sir William Waller, but the relief did not come, and the besiegers renewed their efforts to undermine the walls; the new commander of the Royalists, who had been a friend of the Ludlow family, urged the Colonel to surrender and so save his life. More courtesy again, you see. Shortly after this, after remaining upon guard for two nights, Colonel Ludlow lay down to sleep, and was awakened between ten and eleven by the explosion of the mine. The doors of his bedroom were blown open, the window blown out, and a great breach made. An attempt on the enemy's part to enter was made, but the defenders, only about 100 men, barricaded the breaches and still held out. The explosion had killed three men, destroyed the corn, and the garrison had but four days' flesh food left.

Things were becoming desperate: some of the besieged, especially the minister, urged Ludlow to surrender; he yielded to their entreaties so far as to call a parley, but the besiegers refused to treat now, as their previous offers had been rejected. One thing strikes us much, and that is the small loss of life; not one of the garrison had been killed by shot during the storm, and of the assailants only ten.

After this followed another friendly colloquy, which, however, came to nothing; but the besieged were beginning to lose heart, and so at last Ludlow offered to give up the castle on four conditions —1. Quarter for all the garrison; 2. Civil usage for all his party; 3. Not to be carried to Oxford; 4. A speedy exchange. All this was promised and Colonel Barnes asked Ludlow to come out, saying he would find the besiegers more friendly than he expected. Lord Arundell was very courteous, saying that though he would rather have Ludlow's company than that of his own children, yet if Ludlow desired it he would arrange an exchange of prisoners, Ludlow against the two young Arundells, whom Sir William Waller held. Doddington expressed his joy at seeing Ludlow alive, though sorry to find him showing so much resolution in so bad a cause. The conference ended in Ludlow agreeing to surrender, the civility

of the besiegers, especially that of Lord Arundell, as he tells us, being so great that he showed him where he had buried the plate which he had found in the castle, so that Lord Arundell recovered it, and there is no cause to believe that there is any hidden treasure about these ruins now. It would seem that the conditions agreed on by the besiegers were not fully kept, but Colonel Ludlow does not lay any blame on Lord Arundell for the breach of faith. Here my short account of the sieges must end, and we will now proceed to inspect the ruins of the castle.

1413064

Shaftesbury.

By Rev. C. H. MAYO, M.A.

IN the paper upon Shaftesbury, which I shall have the honour of reading before the Dorset Field Club to-day, I propose to touch but lightly upon the general history of the town, and to indicate briefly some of the leading facts which are already known to us, and then to devote my time chiefly to matters upon which new light has been thrown by my researches, some few years ago, among the records of the borough.

Shaftesbury is so old a town that it rejoices in the possession of a mythical history. A British King, Lud Hudibras by name, is reported to have founded it in the year 940 B.C. With the British town the name Caer Palladur has been associated—a name to which various meanings have been ascribed, upon which I shall not attempt to dogmatize. It is even uncertain whether this name is not of mediæval or even of later invention. Another reputed name was Caer Septon, which comes nearer to the modern form. It must be clear, however, that so commanding a site as that afforded by the spur of the chalk range, with steep descents to the north, west, and south, could not have gone unoccupied even from very early times ; and the entrenchments on Castle-hill—Boltbury,

as they are stated to be called—the *bury* or *byriy*, from which Shaftesbury derives the latter portion of its name, must be correlated with the other Celtic hill-forts with which the county abounds, by whomsoever it may have been subsequently occupied. Shaftesbury also possesses a Toot-hill—a name which has often vexed the antiquarian mind. The former portion of the name of Shaftesbury seems to be derived from the shaft-like (*sceaft*, A.S., shaft) projection of the promontory, on which the fort was made. Shaston, in Latin Shastonia, is another form of the name, the syllable *Shas* being contracted from *Shaftes*. It should not be written Shafton.

There is no reason to doubt that Shaftesbury came under the influence of Roman civilisation. Within two miles to the eastward ran the Roman way between Badbury and Ashmore, and pointing to Castle Rings, near Donhead, traced not long since by the accomplished President of this society. But, beyond the discovery of a few coins, nothing of a tangible character, so far as I am aware, can be produced as evidence of Roman occupation. The real history of the place begins in Saxon times. The town was one of the four royal burghs of Dorset, the others being Dorchester, Bridport, and Wareham. It was situated on one of the main arteries to the west, being on the direct line of road from London to S. Michael's Mount. Its importance may be gathered from the fact that in it was located the chief of the four mints established in Dorset in the Saxon age, more coins having been minted here than in the other three. This privilege was granted by Athelstan (925-941) and a penny struck here in his reign was in the cabinet of the late Mr. Warne. The right of coinage, maintained by Saxon, Danish, and Norman kings, continued here till the close of the reign of Henry III. (1216-1272) though it is not possible, at present, to construct a complete series. At the time of Edward the Confessor there were three moneyers here, each paying 13s. 4d. of annual rent to the Crown and a fine of £1 on a new coinage. The Saxon age saw the rebuilding of the town by Alfred, as recorded by an inscription

formerly in the chapter-house of the monastery, *circa* 880, and probably after destruction by the Danes; and the foundation by the same monarch a few years later, in 888, of a convent of nuns, under the Benedictine rule, presided over by Alfred's daughter, the lady Æthelgifu. Hither was brought for honourable interment, 20th Feb., 980, Edward, King and Martyr, slain at Corfe Castle, 18th March, 978, and unceremoniously buried at Wareham, from which circumstance this town was frequently named "Burgus Sancti Edwardi" and "Edwardstow." Here was buried Ealdgyth, the wife of Edmund Ironside, and here breathed his last, on the 12th November, 1035, the famous King Cnut, though he was not buried here, but at Winchester. These are the chief events of the Saxon time. When Edward the Confessor reigned there were 257 houses in Shaftesbury, many more than in Dorchester and Bridport, and only 28 less than at Wareham, while in 1086 Shaftesbury took the lead in this respect of all the royal burghs in Dorset. It would be hardly too much to say that from that time till now Shaftesbury has been the scene of no events of a very stirring character, though the churches or chapelries, about 12 in number, testify to its general prosperity. The chief interest centred in the Monastery, greatly frequented by pilgrims to S. Edward's tomb. The Norman period saw the rebuilding of the Abbey Church, as demonstrated by its foundations, laid bare in 1861. In 1313 Elizabeth, the wife of Robert Bruce, King of Scotland, was conducted from Carrick to Shaftesbury for confinement in the Abbey. This religious house gradually increased in prosperity, so that it was commonly reported that if the Abbot of Glaston might wed the Abbess of Shaston their heir would have more land than the King of England. The Abbess, like her sisters of Barking, Wilton, and Winchester, held her lands by an entire barony, and if only ladies had attained their rights in those days, would have been accommodated with a seat in the Upper House. The municipal chest still contains a bundle of rolls of her baronial court, "curia feodorum baronie" of the year 1453, when Edith Bonham was the Lady Abbess. At length came the fatal hour of

dissolution. On 23rd March, 30 Henry VIII., 1539, the Abbey, with its property, valued at from £1,166 to £1,329 per annum, was surrendered by Elizabeth Zouche, there being then 54 nuns in residence. From that day Shaftesbury went down. Persistent litigation between the town and the grantees of the Abbey possessions in Shaftesbury soon followed, and continued for 50 years, reducing the town to poverty and indebtedness. Then some taste of the commotions of the civil war ensued, when Waller was quartered here and in the neighbourhood, and when the clubmen, assembling in 1645, entrenched themselves on the Castle Hill. So time rolled on. At last, in lieu of the state of a princely abbess, and the frequent assembly of pilgrims journeying to St. Edward's tomb—in lieu of coining money and being the resting-place of kings and queens, Shaftesbury had to content herself with the humble though useful *rôle* of a manufacturer of shirt buttons, and even the shirt buttons are now made by other hands. The monotony of Shastonian life was broken only by the pleasures of a contested election, which contributed to the pecuniary advantage of the free and independent voter. That source of revenue has also departed, and now that the iron horse, as he rushes from east to west and from west to east, has left Shaftesbury high and dry upon her ancient hill, she can have little hope of regaining her former glories. This is a slight sketch of the general history of the town, which other gentlemen may fill in and amplify to-day, and I will now turn to matters of more detail, among which I may have some points to lay before you from my own investigations. I begin with

THE DESCENT OF THE MANOR.

This subject is not a little confusing and difficult to unravel, partly from the dearth of early documentary evidence. The position seems to be as follows :—Shaftesbury was a portion of the royal demesnes, and the inhabitants held their lands of the king by free burgage. On the creation of the Abbey a certain portion of the demesne land must have been assigned as an endowment, so

that, at the time of the Domesday Survey, there were 177 houses in the town, of which 66 belonged to the king and 111 to the abbess. From this division of lands and tenements must have arisen the double jurisdiction exercised in the town, and the two sets of manorial courts, which appear in later times, the one termed *Curia Domini Regis* and the other *Curia Dominæ Abbatissæ*, which latter attached to the abbess's fee. Both were dated by the year of the king and the abbess. Rolls of the former exist in the Corporation chest for 1446-7, 1460-1, 1471-3, 1475-6, and 1487-8, and of the latter 1352-3, 1428-9, and 1480-2. Both of these courts were held at intervals of three weeks, but the former on Fridays and the latter on Wednesdays, but the business transacted at the court of the abbess appears to have been extremely small, the entry for her court often consisting of but a single line. All this is simple enough, but the complication arises in regard to the devolution of the king's manor. This appears to have been divided into moieties. One of these had, at an early date, passed from the king to other hands, for John Betteshorne held it, *temp.* Edward III., and Margaret, his daughter, 3 Edward III., 1349, held it on the day of her death *(Inv. p.m.)*. This daughter is said to have married Sir John de Berkeley ; at any rate a Berkeley, of that name, probably a descendant of the former, held it at his death, *circa* 1427-8, and Maurice Berkeley, of Beverston, Knt., also held it on his death, 5th May, 38 Henry VI., 1460. One of the Berkeleys subsequently sold it to Compton, who, *temp.* Henry VII., granted it to the abbess, at a fee farm rent of £5 6s. 8d. She thus obtained possession of this moiety of the manor. But she had already acquired the other moiety in the following way. On 8th May, 11 Edward I., 1283, the king devised the moiety which he had in hand to the abbess and convent, at a rent of £12, as tenant at will, which arrangement continued till 9 Richard II., 1385-6, or for about 100 years, when the *Inheritance* was granted to the abbess at the same rent. But the terms of this grant not being sufficiently precise for the purposes of the abbess, she asked for a grant in more specific words, and it was found by

inquisition taken at Pimperne, 8th Oct., 16 Richard II., 1392, that it would not be to the king's damage to make a more particular grant, such as the abbess required—a valuable record inasmuch as it mentions in detail the properties and privileges conveyed. Thus the abbess held, it seems, one moiety of the royal manor from 1385 and obtained the other about 100 years later, in this way becoming the sole mistress of the town. The later history of the manor is that subsequent to the dissolution it passed into the hands of Sir Thomas Arundell, Knt., executed 26th Feb., 1551-2, ancestor of the present Lord Arundell of Wardour, and on his attainder was granted anew by Edward VI., by letters patent, dated 27th April, 1553, for £8,440 7s. 2¾d., to William, Earl of Pembroke. The Earl died 17th March, 1569-70, and the manor descended to his son Henry, the second Earl, who by deed, dated 1st Dec., 1578, conveyed it to the use of Mary, Countess of Pembroke, his third wife, for her life, with remainder to himself and his heirs. She long survived her husband, and on her death, 25th Sept., 1621, the manor devolved upon her son William, the third Earl and then to his brother Philip, fourth Earl, whose grandson Philip, seventh Earl, sold it (says *Hutchins*, but the statement is probably not quite accurate), about 1680, to Anthony Ashley Cooper, Earl of Shaftesbury. The facts above marshalled are worked up from documents in the municipal chest.

THE ABBEY.

It has already been stated that this monastery was founded by Alfred in 888. It was dedicated to B.V.M., but on the translation of S. Edward hither it received an additional dedication, and was subsequently known as the Abbey of S. Mary and S. Edward. His body was translated to another site in the church, 20th June, 21 years after his removal hither. The original building, situated to the south of Holy Trinity Churchyard, gave place to another in Norman times, as shown by the excavations made in 1861, when the foundations of a semicircular apsidal choir and an apsidal north aisle were brought to light, together with a supposed crypt on the

north side of the north aisle. There seems also to have been a south aisle similar to the northern, but the walls were not fully uncovered. About 60 feet of the eastern portion of the church were exposed. The walls were seven feet in thickness, and the width of the Presbytery 28 feet, indicating, on comparison with S. Alban's Abbey, a church of the presumptive length of some 350—400 feet from east to west. The seal of the Abbey, engraved in *Hutchins* iii. 1, represents the west front of a church of cathedral character, in the Early English style, with a spire showing above the roof. I am not aware that there is any evidence that a spire was subsequently added to the Norman church (though some have strangely supposed that the shaft of the spire gave its name to Shaftesbury), and I presume that a seal made in the 13th century would represent a church in the reigning style, of whatever kind the actual church might be. A detailed account of such altars, tiles, interments, &c., as were discovered during the excavations, may be read in Mr. Kite's paper in the *Wilts Archæological Magazine* for October, 1862. The Abbey was dissolved in 1539, and it is marvellous that the church seems to have disappeared by the time of Leland's visit a few years later. Speedy must have been the work of destruction. Perhaps the grantee supposed that if the buildings were gone the chance of restitution would become more remote. The Abbey buildings stood to the west of the church. There were chantries to S. Nicholas, S. Cross, S. John Baptist, S. Catherine, S. Edward, S. Mary, S. Leonard, S. Thomas, and others. Beyond the court rolls already mentioned, and certain rolls of accounts, the municipal documents do not concern the history of the abbey.

PAROCHIAL HISTORY.

Shaftesbury contained anciently about 12 churches, exclusive of the monastic church. These were S. Peter, now including the parishes of S. Martin and S. Andrew ; Holy Trinity, including S. Lawrence and the chapel of S. Michael ; S. James, including All Saints, St. John Baptist, S. Mary (which Hutchins states to be

now reckoned as part of Holy Trinity) ; S. Edward ; and a chapel also dedicated to S. Edward. There were also, in the outparish, a chapel dedicated to S. Anne at Gore, and a chapel at Blintesfield. The parish of Cann S. Rumbold was not situated within the borough. Of the four surviving parish churches, S. Peter's alone dates back to the close of the middle ages, the others having been rebuilt during the present century. This church you will presently have the pleasure of inspecting. Though S. Peter's was reckoned the principal church of the town, the cemetery most used was that attached to the Church of Holy Trinity. The latter church was rebuilt in 1842 by Gilbert Scott, and was one of the first churches undertaken by that architect, then famed as the designer of union workhouses. It is said that in after years he was so dissatisfied with his early efforts in ecclesiastical architecture that he refused to visit the spot. S. James's Church was also rebuilt in 1866-7. The burial ground of S. John can be seen on the hill above it, and its situation has given rise to the proverb that Shaftesbury was a place where, among other peculiarities, the churchyard was higher than the church steeple. This ground was generally used for interments in preference to S. James's Churchyard, which was not enclosed till after 1724. In S. James's parish lies the Liberty of Alcester. It appears to be so named because the Abbot of Alcester, co. Warwick, held lands here which formed a separate jurisdiction. Hence the name of Alcester, as applied to this part of Shaston, must not be taken as indicating any Roman occupation of the spot. I am amused at noting, in a certain publication, the assertion that Shaston "rose on the ruins of Alcester." The registers of the Shaston parishes begin as follows :—S. James in 1559, Cann in 1563, and those of Holy Trinity and St. Peter's in the following century. That of S. James is by far the most interesting. In this parish lived the old family of the Anketils, of Anketil-place, a name still met with in Dorset in the contracted form of Antill. William Anketil was M.P. for Shaston so far back as 34 Edward I., 1305-6. The family is now represented by

a junior branch, settled in co. Monaghan, Ireland, since 1633, where it founded Anketil's Grove. From the deeds in the municipal chest a considerable amount of information may be gathered respecting chantries founded in the churches of the town. John Kilpeke, goldsmith, of Bristol, the son apparently of Robert and Alice Kilpeke, by his will bequeathed to Joane, his wife, a tenement in Goldhill, Shaston, called Kilpekesplace, directing his executors, John Belle, of Bristol, clerk, and John Hans, of the same, goldsmith, after her death, to sell and dispose of the same according to his intentions. The executors granted the premises to eight feoffees 4th June, 1444, and Joane, the widow, quitclaimed the same. A further indenture between the parties sets forth the condition on which the grant was made. The feoffees and their heirs, or the wardens of S. Peter's, were to hold yearly one Placebo on the 8th May, in the said church, for the souls of Robert and John Kylpeke and their wives, with six chaplains, giving to every chaplain fourpence each—and to find two wax candles of two pounds weight—and present one penny to the rector of the church or to his chaplain on the morrow of the said day at common mass, and devote the remainder of the rent to the fabric of the said church. William Ketylton, who founded another *obit* in S. Peter's, was rector of the parish 1491-1509; and of S. Martin's till 1494. In the chest is the appointment, 19th April, 1510, of John Matthewe and Mathew Perye, to administer his will, the executors named therein having renounced probate. He is then described as late of the diocese of Coventry and Lichfield. The endowment of his *obit* consisted of two messuages, "with solers, sellers, gardynes, and courtelages thereto belonging with their app'tennes next Goldhill." An endorsement on the indenture describes it as the "conveyance of the Lamb." There was an *obit* founded by John Mercer *alias Poticary*, in the 15th century (absurdly called *Polycarp* in Hutchins's History). These properties, or some of them, were acquired by Thomas Boxley, of Wimborne Minster, gent., after the suppression of chantries, and by him, on last of Sept., 1557, were conveyed to

Edmund Bowre, gent., then mayor of Shaston, and eleven others, doubtless for the benefit of the borough.

THE GROWTH OF THE MUNICIPALITY.

Shaftesbury is termed in Domesday "Burgus Sceptesberie," but it must be remembered that at this time the term *borough* did not imply that the inhabitants formed a corporate body contracting with the king to hold their town at an annual fee-farm rent. The individual burgess, if he held immediately of the crown, was responsible to the sheriff, or other fiscal officer, for his quota of rent, taxes, or local burdens. You will read in *Hutchins* that Shaftesbury claimed to be an ancient borough by prescription, but he does not tell you that that claim was rejected at a trial upon a Quo Warranto, 9 Jac. I., 1611. The first accession of privileges to the inhabitants was a grant, 30th Oct., 37 Hen. III., 1252, to the king's demesne burgesses of Shaftesbury, "dominicis burgensibus nostris de Shaftesbury," providing that the justices in eyre, whenever they entered Dorset, should visit the town to determine common pleas touching the burgesses, and the latter received the privilege of choosing two coroners to determine pleas of the Crown in the same vill. This was an important concession, as it relieved the inhabitants of summons to answer pleadings in all ordinary cases, *outside their town*. There was yet no mayor of Shaston. When he was first instituted is not known, but John de Haselmere, mayor, appears in the capacity of witness to a charter dated the Sunday in the Feast of the Annunciation, B.V.M., 26 Edw. III., 1352. This charter is now in the municipal chest. This is two years earlier than Robert de Fovent, the first mayor in Hutchins's list. This official was not chosen by the burgesses in their corporate capacity, for as yet they were not a corporation, but, like the coroners, constables, and bailiff, were elected by the jury at the Manorial Court Leet, held at Michaelmas. This appears from a court roll of 1446. Matters continued in much the same position until the granting of the first charter of incorporation to the borough. There is a statement in *Hutchins*, iii. 14, that

"Queen Elizabeth gave the first charter a.r. . . . and granted a mayor, a recorder, twelve aldermen, a bailiff, and a common council." There is simply no evidence to corroborate this statement, and the mayor and burgesses, in the pleas they advanced in the course of the numerous lawsuits in which they subsequently became involved, during which all the available ancient history of the borough was investigated, never made the slightest allusion to such a charter. The first charter of incorporation was, in fact, granted 9th July, 2 Jac. I, 1604, and still remains in the chest in a state of partial decay. It constituted the town a free borough, and the mayor and commonalty a body corporate and politic with a common seal, and contains numerous provisions for the election of mayor, recorder, and twelve capital burgesses. The charter did not give entire satisfaction to the borough, for a draft for a new charter, undated, but apparently 1620, is preserved. This never reached a further stage, and the Corporation was compelled to rest content with the *status quo* until 22nd March, 17 Car. II., 1666, when the charter was granted, which, with a brief exception, continued in force until the Municipal Act, 1835. This charter is printed *in extenso* by Hutchins, and is still carefully preserved in a wooden box among the muniments. An effort was made at Shaftesbury, as in other boroughs, in the latter part of the reign of Charles II., to set aside the existing charter, and with this object in view new letters patent were issued 10th April, 1684 (erroneously ascribed in *Hutchins* to the next reign), which now remain in the municipal chest in great decay, testifying to the low estimation in which they were held. It purported to grant certain additional privileges to the mayor, which may be seen on reference to my book, *Shastonian Records*, but contained this damning clause, that the Crown reserved to itself the power to remove at pleasure the mayor, deputy mayor, recorder, deputy recorder, town clerk, and burgesses. The effect of this proviso was to give the Crown complete power over the Corporation, and, if this had been heartily accepted, the townsmen would have bartered away their political freedom for a

SIGILLUM COMMUNITATIS
BURGI SHASTON.

few benefits of a material nature. It appears that they were unwilling to make this sacrifice of their birthright. The charter of 1665 was never actually surrendered, but was secreted, so it is said, by Atwell, the town clerk, and was again produced when a change in the political atmosphere rendered such a course possible. I may add a word as to the old town seals. One document in the chest, A.D. 1350, is sealed with the "*Sigillum communitatis Burgi Shaston*," as it is termed. This seal, which measures $1\frac{3}{4}$ inches long by 1 inch broad, is a vesica containing the bare trunk of a tree, on the top of which a small bird is perched, and against the tree, on the dexter side, a lion rampant is pawing, while on the other side of the tree, separated from it by a spray of leaves, is a sword, point upwards, and inclined to sinister. Around the seal runs the legend "+ ES.....VS [sinister side] ENSIS. AVIS. LEO. LIGNVM. [dexter side]," which cannot be wholly read, as the seal is imperfect. A seal remotely resembling this, and dated 1570, is figured in *Hutchins*, iii. 17, and is there called the "seal of the Corporation of Shaftesbury for warrants, &c.," and the third section or impalement of the ornament on the top of the old mace, of which an engraving is given by Hutchins, two pages previously, also resembles it. The other seal was the "*Sigillum officii Maioritatis Burgi Shaston*," and bore a cross, in the 1st and 4th quarters a fleur-de-lis, in the 2nd and 3rd a leopard's head, with the legend "*S. officii maioris Bergi Shaston.*" The present Guildhall was built in 1827, where the Goldhill Cross formerly stood, and superseded the *New* Guildhall, which was erected about 1568 or 1569 in the corn market, to the north of S. Peter's Church. The *Old* Guildhall, a still earlier building, was "the last house adjoining to the park wall, west of Goldhill Cross" (*Hutchins*, iii. 7). I may mention that my examination of the documents in the chest has enabled me to add the names of 36 mayors to the list given by Hutchins. One curious custom, connected with the Corporation, must not be forgotten. It relates to the water supply. As may readily be imagined Shaftesbury was ill supplied with this necessary, though plentifully with beer.

Some ancient wells of great depth exist, but water was principally brought by horse or manual labour from below the hill. Some years before Maton wrote (1797) engines had been erected to raise water 300 feet to the summit of the hill, but these had become disused, and recourse again had to the older plan. Enmore Green was one of the sources of the supply. There was an ancient custom for the mayor and burgesses to repair to the springs of water at Enmore Green on the Monday before Ascension Day—(previous to 1663 the day had been the Sunday after 3rd May, Holy Cross Day)—and dance hand-in-hand round the green to the sound of music, bringing with them "a staff or besome adorned with feathers, pieces of gold, rings, and other jewells, called a prize besome, or bezant, and to present to the bailiff of the Manor of Gillingham, in which the springs were situated, a pair of gloves, a raw calf's head, a gallon of ale or beer, and two penny loaves of white wheat bread." The cost of the decoration of the bezant itself varied from £2 12s. 9d. in 1703 to £4 4s. 11d. in 1706, but it was often adorned with loans of plate and jewellery to a considerable value. The original bezant, of gilded wood in the form of a palm tree, about three feet in height, was exhibited at the meeting of the Wilts Arch. Society in August, 1861, by Robert Swyre, Esq., of Shaftesbury. It is now kept at Inwood.

SHASTONIAN LITIGATION.

The unfortunate series of law suits in which the town found itself involved from the date of the Charter of James I., and which for so many years troubled the corporate life of the burgesses, arose from the strained relations existing between the borough and the lord of the manor. These proceedings are scarcely alluded to in the county history. In the middle ages, during the sway of the lady abbess, this friction had not arisen; but after the dissolution, when the manorial rights had passed into the hands of a non-resident lay owner, they came to be regarded only as a source of revenue, and were leased out to an underling with but little regard to the interests of the burgesses. At the same time

the commonalty had grown in influence, and the granting of King James's Charter seems to have been the signal for open war. There had been one passage of arms already, 31st March, 1590, over 22 "shop as carnificales, anglice voc. flesh shambles," but the first serious legal engagement was on information laid in the Exchequer Court, 3 Feb., 1607, that the mayor and burgesses had set up weights and balances in the corn market, at which they required all merchandise to be weighed, and had taken rent and profits of stalls and shambles there. This was followed in 1608 by an English bill in the Exchequer Court complaining that the defendants had set up a common beam or balance for weighing wool, yarn, and other merchandise every market day, and had taken a penny for every "way" of 30lb., and had intruded on the King's soil and the shambles and stalls there. Three years after another suit was entered on much the same matters, and the mayor and burgesses were thrown on all points, except that they were found to be seized of the stalls and shambles, "in dominio suo ut de feodo sibi et succ. suis." This was a leading decision and is repeatedly referred to in the course of subsequent legal proceedings. The moving spirit in these suits was one Nicholas Gower, who was lessee under the lord of the manor, and who was determined to push his rights to the furthest possible extremity. It would be tedious to enumerate the many and lengthened proceedings which occurred on these and similar matters. It will be enough to say that the papers relating to some 22 suits are now in the municipal chest. When litigation had lasted some 30 years the mayor and burgesses, casting about for assistance from their powerful neighbours, addressed a humble petition for the mediation of Thomas, Lord Arundell, in which they state that the "Towne hath been continually vexed with suits in law for and concerning the bouchers shambles, ffyshe cross, and sheep pens for the space of 30 yeere at leaste by Gower the father and Gower the sonne (the informers) to the utter impoverishing of the said towne. The towne by reason of those vexations is growne about 200 li. in debte, there are above 300 begging people

to be releved, and there are not above 30 householders in all the towne able to give releiffe." Again, 10 years later, they address another abject petition to the Earl of Pembroke, and "in all humbleness cast themselves at yr. Lops. feet unfeinedly desiring yr. Lops. gracious acception of this their submission and supplication unto yr. good Lops. for the settling peace and future quiett of that poore populous and allmost ruined towne." How peace was finally made between the Corporation and the lord of the manor seems to be indicated by a deed which, according to the Council minute book, was extant in the town chest in 1704. It is called "a grant from the Earl of Pembroke of the fairs and markets," and three years later it is again referred to as "the ffreehold lease from the Lord Pembroke to the Corporation." If this were in existence it would be possible to trace the final issue of a long-protracted controversy.

PARLIAMENTARY REPRESENTATION.

I must not conclude without adding a few sentences on Shaftesbury as a Parliamentary borough. The list of representatives in *Hutchins* (iii. 18, from Willis's *Notitia Parl.*) begins 25 Edward I., 1296-7, when John Cockaine and Hugh Gappe were returned to Parliament. From that day to the Reform Act of 1832 Shaftesbury returned two members, at that date reduced to one—that one member disappearing at the last Reform Bill. The right of election was settled by resolution of the House of Commons, 29 Feb., 1695-6, to reside in all the inhabitants paying scot and lot, and not in the mayor and burgesses only. There were then upwards of 300 electors. One of the most remarkable members that Shaftesbury ever returned was John Fry, a Dorset man of a family settled at Tarrant Gunville. He was elected 1647-8 and became notorious on account of his religious opinions, which were so disagreeable to the Commonwealth Parliament that his books, called "The clergy in their colours," and "The accuser shamed, or a pair of bellows to blow off the dust cast upon John Fry," were, by order of the House, burnt

by the common hangman. He was one of the commission for the trial of Charles I., though, through the chance of being suspended by the House from sitting at the critical moment, he did not vote for the king's execution, nor sign the death warrant. He was expelled from the House 22 Feb., 1650-1, but did not die till about six years later. Though already dead he was excepted out of the Act of Oblivion, and his estates were forfeited (*S. & D. N. & Q.* vol. 1, pp. 53 and 73.) The right of returning members to Parliament became at last a valuable source of revenue to the scot and lot voters, so that after the election of 1774, when Hans Winthrop Mortimer unseated on petition the sitting members, Sir Thos. Rumbold and Francis Sykes, the committee of the House of Commons ascertained that a person, sworn to be Mr. Alderman Matthews, in the disguise of Punch, through a hole in the door of a small apartment, delivered to the voters parcels consisting of 20 guineas. This election gave rise to lengthy but abortive proceedings in Parliament, but at the assizes in 1776 Mr. Mortimer recovered £11,000 from Mr. Sykes for 26 acts of bribery.

But time warns me that I must bring to a close this tedious retrospect. Gone, alas! is the noble pile of abbey buildings, with the tomb of the martyred king. Gone well nigh all the twelve parochial churches. Gone the Butter Cross, the Fish Cross, the Goldhill Cross, and the Old and New Guildhalls. Gone are the Parliamentary representatives, and with them the parcels of golden guineas so deftly handed to the independent commonalty of the town. Gone is the stately dance of the mayor and burgesses round the springs of Enmore Green. Well may the Shastonians of to-day make the old Park wall their "wailing place" for glories never destined to return. But there is one thing they cannot lose; for they may still look forth from their castle mounds on the lovely prospect of fertile valley, breezy down, and wooded hill, right worthy of a summer pilgrimage—a prospect which has rejoiced the hearts of kings and queens, and righteous men and women of old—and find in the contemplation of the works of Nature a satisfaction they can no longer derive from the works and art of man.

The Helstone on Ridge Hill, Portesham.

By E. CUNNINGTON, Esq.

PERHAPS I may be permitted to say a few words in the first place as to the origin and composition of the many large rough stones, usually called *Sarsens*, around us at Portesham, and those following the stream down the valley to the sea. Professor Prestwich and other geologists consider them to be large masses of sand concreted together by a silicious cement. When the chalk stratum, now forming our highest hills, was at the bottom of the sea, beds of sands, clays, and gravels were deposited upon it; when these were afterwards raised above the bed of the ocean they were denuded by the powerful action of seas, glaciers, and rivers, by which the main portion was carried away, leaving these blocks of sandy rock scattered about. In parts of Wiltshire their remains are very abundant; they occupy for miles the bed of a valley near Clatford, Marlborough. *Helstone*, the name of the group of stones now before us, comes from either the Anglo-Saxon "hele," to hide or cover, or from "Hel," in Northern mythology the Goddess of the dead. Originally it was a long barrow, containing in its centre the nine stones supporting the large top or table-stone, 10½ft. long, by 6ft. broad, covering the usual interment. The lapse of many centuries has worn away the covering earth and exposed the stones

to view as in many other instances. Hutchins gives us a picture of this dolmen, as I suppose it was in his time ; there it appears as perfect as a well-made mahogany table. The poor table came to grief entirely, but was re-instated as we now see it by the late Mr. Manfield, and I venture to think you will all agree that it is well done.

The next structure is a somewhat similar one, the *Grey Mare and Colt*, near Gorwell. This externally is a long barrow, 54 feet long, 25 feet broad, and about 5½ feet elevation, covering the dolmen or stone-chamber within. Dolmen means a stone table from two Celtic words : "daul," a table, and "maen," a stone. It has been opened at each end ; at the south end are exposed the three megalithic uprights, and the top or table-stone ; each is about five to six feet high and two to three feet diameter. The total number of stones composing this dolmen is ten, as at the Helstone ; they consist of four conglomerates and six Sarsens. At the north end was apparently another interment with much smaller stones. Both of these chambered monuments date from the Stone Age. In France there are upwards of 3,000 ; some of these I had the pleasure of seeing in Brittany in 1883.

The most interesting and perfect is that of *Gavr Innis* in the Morbihan. The mound is 197 feet in diameter and 30 feet high ; it is entered by a passage 44 feet long, leading into a chamber nine feet by eight feet. Both passage and chamber are lined by stones curiously sculptured with wavy, circular, and spiral lines. Probably the largest known of these dolmens is the one on the banks of the Boyne at New Grange, near Drogheda. It has a diameter of 316 feet, a height of 70 feet, with a passage 63 feet long, and many of the stones are there also sculptured with spirals and zig-zags. The gigantic monument is further distinguished by a circle of stones standing round it. These circles of stones were generally used to indicate places of interment, and consisted of large stones in the Stone Age, as we see at the Winterbourne circle and also at that near Abbotsbury, not far from the Gorwell dolmen. These circles were smaller at a later date, as I found in opening a

barrow on Mr. John Mayo's farm near Upwey (No. 4 on my plan of these barrows). This circle was hid under the turf and enclosed two Kistvaens with cremations in urns.

We have only time for a short notice of Stonehenge and Avebury temples, simply saying that Mr. Flinders Petrie writes as follows in his book on Tel-el-Hesy or Lachish :—"This same peculiar dressing (of the Lachish Stones) is that of the stone work of the temple of Hagir Kim at Malta. This temple is called Phœnician, and what lends some support to this is that just the same system of stone tables, each on two blocks placed around the inside of the enclosure, is to be seen in the sacred enclosures of the villages in Philistia to this day. The same pock dressing is that of the wrought stones at Stonehenge, the best examples of it being on the flat tops of the uprights of the great trilithons."

Plush.

By Rev. Canon RAVENHILL, M.A., R.D.,

Vicar of Buckland Newton cum Plush.

THE Titling of Plush is a detached portion of the large parish of Buckland Newton, called Boclande Abbas in olden days.

Our late Dorset poet, the Rev. W. Barnes, said "Newton" described Buckland as the new enclosure, Alton, the adjoining parish, being the old enclosure. Bocland, according to Blackstone, means land held by book or charter, as opposed to Folkland, which was land held by common consent.

Plush is mentioned under the name of *Plis* in the Rentalia et Costumarium of Glastonbury Abbey (cf. Somerset Record Society, Vol. v., p. 105). It formed part of the Manor of Buckland Newton, and was given with it, according to John of Glastonbury, by King Ethelwolf (838-857) to the Abbey of Glastonbury.

The late Canon C. W. Bingham told me *Plis* meant a coomb or dell. I know not what authority he had for this derivation. (My friend, the Rev. C. H. Mayo, cannot find *Plis* in the Anglo-Saxon Dictionary.)

In the year 851 a great Danish invasion took place. If Nettlecombe Tout and the Roman Fosse could speak they would probably tell some stirring stories of those terrible times.

Ethelwolf was the father of Alfred, whose tower* forms a very striking object from Nettlecomb.

The grant was made to Glastonbury a century before the extermination of wolves, which must have had a goodly run in the Forest of Blackmoor, adjoining Plush. The Roe Deer are still wild in this district, are on the increase, and peep their heads occasionally from the coppice opposite the new Church of St. John the Baptist.

The old Chapel was built on a very picturesque knoll about three-quarters of a mile to the north of the present building, and about the same distance from Monkwood Hill, where the name reminds us of the connection with Glastonbury.

In the return to the Commission of 1650, the Church is described as a Chapel of Ease to Buckland, three miles distant. Plush then contained thirty-two families, and desired to be made a parish.

Mr. Guilliam, the curate, led a very disorderly life. His salary was £14 per annum, and "other unlawful advantages." The Tithes of this Tithing were then £35 per annum.

In the old Church, more than half-a-century ago, the Rev. William Butler (better known as Parson Billy Butler) was cautioned, when taking the duty one Sunday, not to enter the Pulpit, or he would disturb a hen sitting there. The late Lord Digby was told this by Mr. Butler.

The building, having fallen into decay, was pulled down in 1847, and the materials were worked into the new church, which was built nearer the hamlet, and was opened in 1848.

The old carved font narrowly escaped disappearing altogether. The late Charles W. Bingham had an affectionate remembrance of it in the old church, and in one of his ruri-decanal visits routed it out of a dilapidated barn, to which it had been consigned years ago.

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* This Tower was built at Stourhead in the last century by Henry Hoare, Esq., to mark the Hill where Alfred is said to have erected his Standard against the Danes.

I knew not of its existence. I was with him at the discovery and remember his joy. It is now placed unrestored in the new building. It is of very early date and beautiful design.

Plush abounds in antiquities. Entering the village from Dorchester on the left are Lynchets or terraces, made in all probability that the slopes might be cultivated. Tumuli and pit dwellings are plentiful on the Downs ; the Roman Fosse is clearly marked, and Nettlecomb Tout* has much of its Celtic earthwork remaining.

On Whatcombe Down, between Buckland and Plush, is a small Roman camp of observation, commanding a view across the county from north to south ; also the site of an ancient British village.

In 1872 seven British urns were found in a barrow by the late Mr. Charles Miller, on the Down between Plush and Liscombe. A Plush labourer,† who assisted in opening the barrow, says these urns were only about three feet below the surface.

Alas ! for Dorset that the new museum was not then in existence ! Professor Rolleston, of Oxford, took charge of these interesting remains, and placed them in the Ashmolean Museum. Mr. Evans, the curator, says these urns evidently contained cremated remains. Calcined bones are still in one of them. They are of rude British fabric. Three of them are fragmentary, with a rough indented herring-bone pattern.

In 1879 Mr. Cunnington found, under an immense cairn in a Plush barrow, an urn of dark imperfectly burnt ware, about nine inches long and nine inches broad, with faint rudiments of plain bands round it, and two out of probably four smaller knobs in the side. This urn is in our museum.

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* This name seems to have been largely applied by the Saxons to hills of this kind consecrated to the worship of their God Tiw.—(Warne's "Ancient Dorset," p. 87.) Teute, Toute, Tiw, were synonymous with the Greek Zeus, the Roman Jupiter.—(Max Müller, "Lectures on Language," 2nd series.) Toot-hill is found applied to any height of extensive observation.—(As in Sir John Maundeville's Travels.)

† Robert Lovell, 45 years sexton.

Armswell, where the Field Club had a picnic luncheon last August, at the foot of Nettlecombe Tout, was formerly a manor in conjunction with Netherbrook, and belonged to the Abbey of Glastonbury. It is in the Tithing of Plush. At the Dissolution of Monasteries it was granted to Sir John Horsey, of Clifton Maubank. Richard Arnold, who died in 1595, married Mary, his eldest daughter. From the Arnolds the estate passed to the Framptons of Moreton, who sold it to the late Mr. Farquharson, of Langton.

1. Lita (Gelechia) suædella, Rdsn. 2. L.ocellateila Sta.
3. L.plantaginella, Sta., with larvæ and food-plants.

EXPLANATION OF PLATE.

1. *Lita (Gelechia) suædella*, Richardson. 1. Imago ; 1*a*. Larva, both highly magnified. 1*b*. Shoot of *Suæda fruticosa* (Shrubby sea-blite), natural size, with terminal leaves spun down by larva which is feeding inside.

2. *L. ocellatella*, Stainton. 2. Imago ; 2*a*. Larva, both highly magnified. 2*b*. Flowering shoot of *Beta maritima* (wild beet-root), natural size, much contorted by operations of larva which is feeding inside.

3. *L. plantaginella*, Stainton. 3. Imago ; 3*a*. Larva, both highly magnified. 3*b*. Plant of *Plantago coronopus* (Buck's horn plantain), natural size, shewing middle of plant affected by the boring of the larva down the central part of the root, on which it feeds.

Dorset Lepidoptera in 1892-3,

With Description of the Larva of Epischnia Bankesiella, *Rdsn.*

By NELSON M. RICHARDSON, B.A., F.E.S.

IT is with some hesitation that I take upon myself the task of writing about the Entomology of the past season, as I have been able to do but very little collecting myself, owing to the fact that my eyes have not been in a condition to do more than a very little setting, especially of the smaller moths, and if one cannot preserve them it is of no use to catch them. I have, however, a few notes of interest to record, and the general features of both 1892 and 1893 have been so peculiar, from an Entomological point of view, as to deserve mention.

Perhaps the most striking phenomenon in the past two years has been the appearance amongst us in great numbers in 1892, and in smaller numbers in 1893, of a butterfly which is generally a rarity, *Colias Edusa*, the "Clouded yellow."

In 1892 specimens began to be seen in the latter part of May, and became common about the beginning of June. In Sussex a

specimen was noticed as early as May 12th, in Weymouth about May 24th, in Purbeck on May 30th. The only at all satisfactory theory to account for the sudden presence in numbers of this species is that of immigration, though I believe that there is very little, if any, *direct* evidence of it. It is, however, a well known fact that butterflies do make very extensive migrations, as immense swarms have not infrequently been observed at considerable distances from land in the act of flight; but I am not aware that any theory has been put forward to account for this peculiar instinct, nor is there known to be any regularity in the times of its occurrence, so that we are still quite in the dark as to its cause. The assembling of such vast multitudes into one mass is in the first place most unusual in butterflies, which are not given to such habits without some special external attraction, such, for instance, as a field of lucerne, being present. The fact, however, of this immigration seems incontrovertible, for the last appearance of the species in anything like numbers was in 1877, since which time only a few stragglers in sheltered southern spots have been seen in this country, added to which is the fact that those found here in the early summer are not in sufficiently good condition, when just seen, to suggest the idea that they have lately emerged from the chrysalis; but, on the contrary, look like specimens which have hibernated or at all events been on the wing for some time. That they did not hibernate in this country is shown by the fact that in 1891 the insect was at least very scarce, as I do not find a single record of its occurrence in the Entomological magazines for that year. The last year in which it was abundant was 1877, in which it swarmed as in 1892.

In the present year of 1893 *Edusa* has been abundant in some parts along the S. Coast, but apparently locally, and not to anything like the extent, either as to numbers or general distribution, which it reached in the previous year. Personally I have seen very few specimens in Dorset this year, and Mr. Cambridge's experience is the same; but it was abundant at Ringstead in August, and from records in the Entom. magazines it would appear

that Dorset and Devon had been the counties most affected by this species in 1893, as it is stated to have swarmed at Lyme Regis, Swanage, Poole, and Sidmouth.

Colias Hyale, the other British species of this genus, has very similar habits as regards this country, but the two species are not by any means always affected by the same causes. For instance, in 1842 *Hyale* was common, but there were no *Edusa*; whilst in 1877, when *Edusa* was abundant, *Hyale* was absent. In some of the S.E. portions of England *C. Hyale* occurred sparingly in 1892, but the records in 1893 are very meagre. The one Dorset record of *Hyale* for the two years is for Aug. 28th, 1893, at Swanage (Ent. xxvi., 322), but is not, I consider, admissible, as the would-be captor only *saw* the butterfly on the wing and might very likely have mistaken its identity, as the pale variety of *Edusa* (*Helice*) would be very like it when flying.

Another species, *Vanessa cardui*, the "Painted Lady," appeared with *C. Edusa* in immense numbers in 1892, but has been scarce this year, whilst a near connection, *Vanessa Atalanta*, the "Red Admiral," which is, as a rule, more regular in its ways than the Painted Lady, was not commoner than usual in 1892, but appeared in unusually large numbers in the autumn of 1893. I doubt if this species is so much given to migrations as its cosmopolitan relation *V. cardui*, and have no doubt that the autumn individuals of 1893 were all true Dorset natives. Another butterfly which has been in swarms this season is *Polyommatus Phlœas*, the "Small Copper."

In connection with the immigration of butterflies in 1892, there appears to have been also an immigration of a few kinds of moths which are generally great rarities in this country. For this county several are recorded by Mr. Eustace Bankes from Purbeck, including *Catocala electa*, found by him in a glass frame wasp trap in his garden, and *Micra parva* taken in a salt marsh, also an unusual locality for it. He states (E.M.M. xxviii., 309) a specimen of *Vanessa Antiopa*, the "Camberwell Beauty," was *seen* on the wing by Mr. Geffcken whilst driving from Swanage to

Studland. Being well acquainted with the species abroad he was able to identify it, as he obtained a good view of its upper side; but where no capture is made one always feels that there is a chance of a mistake, and such records have not the value of those of actual captures.

Another great rarity which was taken in Dorset, as well as elsewhere, in small numbers, in 1892, was *Deiopeia pulchella*, the "Crimson Speckled Footman." One occurred at Fleet within two miles of my house, and was captured by a young entomologist, Mr. Jardine. Another is also recorded from Weymouth (Ent. Record iii., 160). Both were taken in May, an unusual time for the appearance of this moth in England, which generally occurs, when it occurs here at all, in the autumn—the continental 2nd brood. I was not myself so fortunate as to take any of these rare visitors.

In 1893 I am not aware that many rarities have been recorded, though the weather has been so unusual in its nature that it has quite upset the usual order of events, and species have appeared long before their proper time, and have in some cases had two broods where generally there is but one. The entomological records of the late Mr. Dale began in 1808 and have been continued by his son, Mr. C. W. Dale, down to the present time without intermission; but in no year is the "Lulworth Skipper" *(Hesperia Actæon)* known to have appeared so early as in 1893, when it was captured on May 26th. Other insects were just as early; for instance, I found that *Steganoptycha subsequana*, of which the usual time of appearance is the beginning of May, was fully out in the 2nd week in April and almost over by May. Probably it would have been found to be on the wing at the beginning of April, had I then visited its locality.

Many other instances could be adduced and are mentioned in the Entomological magazines, such as a note by Mr. Bankes (E.M.M. xxix., 191), in which he enumerates several species taken on a sheltered piece of undercliff in Purbeck on May 31st, all before their usual dates.

This was doubtless owing to the long continuance of warm weather in the spring, which caused the pupæ to develope early and produce the imagines before their proper time.

These early summer species, emerging in May, June, and the beginning of July, live through the winter either as larvæ more or less in a state of hibernation, or as pupæ. The hibernating larvæ are only waiting for heat to get on with their development, and a little warmth, which causes the leaves of the food plant to shoot, brings them also out to feed on them. Whether it comes in February or April the effect is similar, and if it continues through the spring, as in 1893, so that no check is given either to food plants or larvæ, the result is an early emergence of the moths.

So far as my experience of the year goes, however, I did not find that this abnormal spring produced any particular effect upon those species which emerge in the autumn about September, and I do not think that the bulk of them, with the exception, perhaps, of some species of *Agrotis*, are much dependent upon season for the time of their appearance. Many of them hibernate as moths, and lay their eggs in the spring, and in other cases, where the eggs are laid in autumn, the larvæ do not hatch until the spring, perhaps about April. Others, however, lay eggs in the autumn which hatch in a week or two. But in all these cases it does not seem as if the emergence from the pupa was affected by heat; on the contrary the moths do not naturally appear until the hottest months of the year are past and the temperature begins to diminish, and one would therefore hardly expect a hot summer to bring them out sooner. The spring comes at so early a period of their life that it does not appear, as in 1893, to exercise much influence on the period of their final stage.

Mr. Cambridge records some of his 1892 captures at Bloxworth in "The Entomologist" (xxvi., 87), amongst which the following are specially worthy of notice:—*Notodonta trepida*, *Noctua ditrapezium*, *Tryphæna subsequa* (a rare moth which he used to take in his strawberry beds), *Emmelesia unifasciata*, *Aciptilia paludum*

(which was scarce), *Rhodophæa advenella*, *Tortrix cratægana*, *Sciaphila sinuana*, *Eupœcilia geyeriana*, *Tinea albipunctella*, *Tinagma betulæ* (not so common as in 1891), *Gracilaria imperialella* (one specimen, the second only recorded in Dorset), *Cosmopteryx orichalcella* (two specimens, new to the county), and several species of *Elachista*—a genus which appears to be in force at Bloxworth. *Micropteryx Kaltenbachii* is recorded by Mr. E. R. Bankes as new to the county, taken by himself at Corfe Castle, April 22nd, 1893, and *Bryotropha tetragonella*, also new to Dorset, taken by Rev. C. R. Digby, at Studland, at the end of June, 1892. This is probably the last addition that Mr. Digby has made to our county fauna, and it is a source of great regret that so good an Entomologist should have left Dorset. I have no doubt, however, that he will continue his work in Hampshire and make many new discoveries. Mr. Bankes has also turned up *Coleophora deauratella* in Purbeck, which is new to that district, though not to the county. (E.M.M. xxix., 46-47.)

I may mention the occurrence of a specimen of *Dasypolia templi* at Portland, in September last, which I have not taken there before. On the same night *Epunda lichenea* was very abundant, especially during the rainstorms, which were frequent and heavy, causing Mrs. Richardson and myself to spend a good part of the time in a cave. We had two large attracting lamps and the moths came in little swarms, five or six being on the glass at once, but as soon as the storm cleared off their flight almost ceased.

On the Chesil Beach occur several species of the genus *Lita*, which have hitherto been much confounded together on account of their variation and general resemblance to each other. This little group has been the subject of a paper by myself in the Ent. Monthly Magazine (xxix., 241), which deals specially with four of the species, the other British species being the subject of a paper by Mr. E. R. Bankes, which will, I understand, be published shortly in the same magazine, and which I must not anticipate. (E.M.M., xxx., 80.)

There is a somewhat rare plant, *Suæda fruticosa*, which, with its annual congener *S. maritima*, grows here and there in abundance along the Chesil Beach. For many years past it has been known that a small moth was attached to this plant, not only here, but also in Lancashire, Norfolk, and Essex, but it was formerly set down as one of the varieties of *L. instabilella* or one of the other species of *Lita*. I believe that I was the first to breed this moth in this county, having found the larva at Weymouth in May, 1885. Mr. Bankes was just a year later. I therefore undertook to describe it as a distinct species, which it has been generally admitted to be for some time past, and have done so in the before-mentioned paper. The species of this group found on the Chesil Beach are *suædella, plantaginella, ocellatella, instabilella, salicorniæ*, and the nearly allied *obsoletella* and *atriplicella*.

The descriptions having been published, I will not repeat them here, but merely make a few remarks upon the habits and mode of life of some of these species. In the early part of April *Suæda fruticosa*, which is an evergreen perennial, shows no sign at all of larvæ feeding upon it, whereas this is the time to find the larvæ of *instabilella* upon *Atriplex portulacoides*—another evergreen sea shrub of low growth, and one of the most easily recognised of the difficult *Atriplex* group.

ERRATUM.

Page 65, line 5 from bottom, for "wood" read "mud."

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The larva mines a leaf of the Atriplex, completely eating out the fleshy inside in patches, making the leaf appear whitish green. It also spins up the leaves against the stalk to a slight extent.

Lita suædella burrows among the fleshy leaves of the *Suæda*, which are something like thick short pine needles, spinning them down to the stalk so as to conceal it from view. The egg is apparently hatched about the end of April or beginning of May, and the larva is full fed at the end of May, when it leaves its burrow to spin up in the sand or wood underneath the plant on which it has fed, the moth emerging in July.

Lita plantaginella, which comes nearest to *suædella*, feeds as a larva in a plant of plantain, *Plantago coronopus* being the most usual species on the Chesil Beach. The egg being laid somewhere

in the middle of a shoot, the larva gradually burrows in the root to the depth of nearly ½in., as it feeds on its substance. It spins together the central leaves of the plant to conceal itself from view, and changes to a pupa in its burrow, emerging towards the end of June.

The most beautiful larva of these four species, which I have fully described and differentiated from each other in my paper above referred to, is that of *Lita ocellatella*, which is tinged with brilliant crimson and feeds on *Beta maritima*, the wild form of the beet root of our gardens. Many of these seaside plants have a strong tendency to assume the red tinge which has been so developed by selection in the garden beet, and it is not impossible that this may account in some measure for the bright hues of this caterpillar, which either mines in its very thick massive leaves, or spins up amongst its flower shoots. Still there are other larvæ which have equally brilliant tints, which do not proceed from this cause. The ordinary form of the moth is cream-coloured with darker markings, but a bright pink variety was figured in Vol. xii. of our Proceedings, a colour which I have not noticed in the perfect state of allied species.

Mr. Bankes having taken the other species under his wing, I leave them for the present.

As I have said, I have been able to do but little collecting this year, but we have been successful, after a protracted search of six years, in finding and breeding the larva of *Epischnia Bankesiella*, of which we discovered the moth in 1887 at Portland; and of which, in spite of hard and continuous work in pursuit of it, we had, up to 1892, only taken six specimens. It has not yet been found in any other part of the world except this small locality at Portland. There seemed to be no clue to the food plant, as the moths were taken on flowers at night, except the first two, which were flying at dusk, and the only thing was to examine the plants generally—no light matter, as Portland has a varied flora. To Mrs. Richardson belongs the credit of finding the right plant, of which we had suspicions in 1892, which were confirmed this year by the

breeding of the moth. I regret to be obliged to withhold its name, but such is the rapacity of some collectors, who make a business of dealing in insects, especially moths, that the species might be exterminated from the locality were it known—an energetic collector might make great havoc in even a day.

The first time that I saw the larva was in 1889, when a captured female laid four eggs in two pairs, those of each pair being fastened together in the way of a cottage loaf. This was a most unusual circumstance, which I have not before observed in any moth ; but it was either accidental or an individual peculiarity, as it has not again occurred, though I have seen a good many more eggs. The egg is oval, flattened, beautifully iridescent, and covered with very minute holes and small wavy ridges, enclosing numerous little spaces with from three to six sides each. The little larvæ duly hatched, but I knew not on what to feed them, and after trying many plants I got them to settle down quietly on a thistle floret near the seed at the bottom. Now it is not at all the custom of caterpillars to seem contented with food that they cannot eat, and they generally wander about restlessly until they find some more to their taste ; so that I naturally assumed that thistle was *the* food plant. But my pleasure was short-lived, as they all died in a few days, and I had to satisfy myself with taking a description of them, and meditating on their amiable dispositions. I found afterwards that the larva does not live in flower heads at all, but from its earliest days spins a sort of nest round itself in a shoot of its food plant, and after a time, when this nest attains some size, lives in a silken tube in the middle of it, coming out at night to feed upon the leaves. In the autumn it thickens the middle portion of this tube, and there passes the winter. In the spring it seeks fresh food and constructs another nest. About May it closes up the ends of its silk tube, forming a rather strong cocoon, turns to a pupa, and emerges in June or July. This year, owing to the abnormally early season, there was a second brood of this moth, as well as of many others, which I proved by breeding a specimen on September 26th from an egg laid in the early summer. I do

not, however, believe that there is generally more than one brood. The larva is not very active, though it can retreat quickly into its tube when disturbed. It sometimes waves about the fore part of its body, stretching it out to nearly double its ordinary length. It is delicate and not easy to rear, so that I did not breed many moths.

Description of Larva.—The full-fed larva is about an inch in length and tapers somewhat towards each end, especially the head, which is less than half the width of the middle segments and rather flattened; the head and plates are a little more polished than the body, which is dull.

The ground colour varies a little in tint and may be described as putty-coloured, with a tinge of green, especially between the segments. The head and legs are pale brown, much mottled with darker brown spots, the prothoracic and anal plates much like the body, but a little more distinctly marked, the longitudinal lines having a tendency to break up on them into darker spots, as on the head. These lines, which are somewhat broader than in the young larva, so that less ground colour is visible, are dark purplish brown, and consist of a dorsal line (a trifle darker than the rest) and five other slightly wavy lines on each side at equal distances from each other, the fourth of which contains the spiracles, the fifth lying along the ridge of the skinfold below. There is a medio-ventral line, and the claspers and underside are more or less marked with the same colour. The spiracles and warts are marked by very dark brown rings and the bristles are pale brown. The hooklets, which are numerous, are dark brown.

The larva changes its appearance very little during its life, with the exception of the markings of the underside, which appear at a very early period, I believe after the first change of skin.

The pupa is about 5 lines long and very smooth and neat in appearance, the different parts fitting closely together. The antennæ and wing cases extend to the end of the 9th segment, leaving the remaining four segments movable. The tail is rather blunt and has about 6 small short hooked wire-like processes. The colour of

the pupa is chestnut brown, with the wing cases greenish or entirely brown.

Further experience of the moth has shewn me that it varies considerably, some of the specimens being very pale, almost cream-coloured, with dark grey markings on the veins and elsewhere. I have one specimen of the ordinary cinereous grey form, but with the transverse lines very distinct and dark, a handsome and unique variety. The habits of the imago seem most retiring, and this doubtless accounts for the rarity of its captures. It is one of the most difficult moths to see in the breeding cage, especially when sitting on a dead stem or piece of stick. It sits very closely and looks like an accidental slight excrescence, so that one may look for some time without noticing it.

I have much pleasure in presenting a specimen to our Museum and I hope that we shall soon be able, with the help of our entomological friends, to make some show in the excellent cabinets which have been provided, so that the worthy Secretary and Curator may no longer have to mourn over the absence of a collection of invertebrate animals.

Wareham: its Origin and History.

By E. CUNNINGTON, Esq.

WAREHAM is appropriately named from ware or weir, a dam, pool or weir; and ham, a rich level pasture or plot of ground near a river.

This is evidently one of the strongholds of the Durotriges, so often explained as the dwellers by the water. Poundbury at Dorchester, Dudsbury near Wimborne, by the side of the Stour, and Spettisbury again are all of the same make and characteristics. These were not living places, but camps in time of war or danger, and the three last mentioned appear to be almost exactly as left by the makers eighteen hundred years ago.

I am quite content to take Dr. Guest's account of the invasion of England by Aulus Plautius in A.D. 43, as told in the Archæological Journal of 1866, page 160, as follows:—He says that the force led by Plautius could not be much less than 50,000 men. In subordinate command were Vespasian and his brother Flavius Sabinas, and a veteran officer named Cneius O. Geta. The fleet, no doubt, sailed from Boulogne, directing its course to one of the three little ports on the Kentish coast that we know the Romans chiefly used, viz., Hythe, Dover, and Richborough. Dr. Guest's map of the campaign shows that it never touched any

part of Dorset. Nor should I imagine it likely to have done so; these parts were most probably attacked years after, as the Romans gradually grew in strength inland.

In reading over the proceedings of the Archæological Institute meeting at Dorchester in 1865, I find that the late Rev. W. Barnes said as follows:—"The Saxon English settled in England so near the time of the withdrawing of the Roman legions that they found their castra, with many other marks of Roman life and handiwork, from Manchester to Dorchester, and yet, although they must have known Wareham as early as Dorchester, they did not call it a ceaster, but took it only as a Wareham, *i.e.*, mound-enclosure. I do not know that the spade reaches at Wareham any tesselated pavement, or turns up such Roman remains as betoken a long-holden abode, nor are the walls quite up to the Roman plan in straightness or squareness of form. A British trackway leads out of the west gate of Wareham, called the West Port, from the British word, porth, a passage." I quite agree with Mr. Barnes. I have never seen or known of Roman remains found *in* Wareham, but plenty of mediæval.

Wareham stands in rather a remarkable position—a peninsula bounded on the south and north by two rivers, on the east by Poole Harbour, a long strip of sand and gravel; except by water, accessible only by land on the west side. The Romans found it as the Durotriges left it, and I cannot help thinking that they also left it alone; there would be nothing inviting there.

Camden, in Gibson's edition, date 1695, says: "Wareham, fortified by earthen walls, thick and high, besides the advantage of the rivers. 'Tis probable enough that this rose out of the ruins of a little poor place called Stowborough, for Stowborough, though but a mean place, is governed still by a Mayor, which plainly shows that it has formerly been much more considerable."

That the Romans made use of the clay in their pottery at Norden I am well aware; also their use of the Kimmeridge clay needs scarcely mentioning; but both of these works must have been independent of Wareham earthworks. I exhibit to-day a

fragment of fluted Roman pottery almost exactly the same as that usually called New Forest ware, as seen in our Museum; also a Roman quern from the same place.

The first mention of Wareham is in the time of Alfred the Great, about 876, when the Danes took the town and destroyed its castle and nunnery. During the Danish invasions it was a theatre of war and destruction for about a century and a-half, and its fame rose from its misfortunes. This unhappy place suffered all the miseries of war: the inhabitants were driven away, or plundered and massacred, and the whole town reduced to a heap of ruins. In Edward the Confessor's time—about 1042 to 1066—as recorded in Domesday Book, it had 148 houses in it; but in William the Conqueror's time there were but 70 houses standing; afterwards it reflourished and the Conqueror built a castle there. "In the time of Henry II., suffering much by wars and the casualties of fire, together with the sea robbing them of the haven, it is almost run quite to ruin, and the soil that was in the very heart of the ancient town produceth great quantities of garlic." When Stephen took Wareham in 1142 he burnt the town and surprised the castle.

On Sunday, July 25th, 1762, a dreadful fire broke out amongst the then thatched houses, so that in three hours two-thirds of the town was reduced to a heap of ruins. In the session of Parliament following, an Act was passed for rebuilding the town and preventing future danger by fire, &c. Thatched houses, furze, and hayricks were prohibited. Several buildings in the middle of the street and others projecting into it were removed, and in about two years the town rose fairer than before.

In Britton's "Beauties of England and Wales," published in 1803, he says: "South Bridge was an ancient structure crossing the Frome, and probably coeval with William II." He probably means William I., about, say 1080, when he built the castle, and if a stone castle, I rather expect that he built the bridge to take the stone to build the castle. This bridge was doubtless the great want of the town of Wareham and from

which the line of streets came in position. In 1775 this bridge, being ruinous, was rebuilt by a handsome structure of Purbeck stone having five arches. When the causeway and bridge on the north side was made I know not, but this structure no doubt determined the line of street in that direction.

[Since publication of this paper a letter has appeared in the *Dorset County Chronicle* asserting that some Roman antiquities have been found within Wareham Walls. But Mr. Cunnington adheres to what he has already advanced.]

Some Additions to the Dorset Flora.

By Rev. E. F. LINTON.

THE County of Dorset has been so thoroughly worked with a view to the forthcoming County Flora by the President of our Society and other botanists that there does not seem much probability of many additional plants being found within its limits. Yet, since this year has witnessed the discovery of some four or five native plants previously unknown to Dorset, it is hardly the time to give up research. I have been asked to give some account of those recent additions which have come under my own notice.

Taking them in the order of the Natural Orders, I mention first a rose which I met with last June, when exploring the chalk downs which lie between Compton and Melbury Abbas, near Shaftesbury. This ground produces some other rare and interesting plants—viz., *Lathyrus Aphaca*, *Orobanche elatior*, Sutton, *Allium oleraceum*, *Carex humilis*, &c. The rose is a variety of the species known as *R. sepium*, Thuill. (*R. agrestis*, Savi), which has the glandular leaves of sweet-briar, but its scent only in a very faint degree, and is a connecting link between the sweet-briar and the dog-rose (*R. canina*, L.). This rose has in the past been placed by some as a variety under *R. canina*, but by general consent is

now accepted as a species, and is a type with some varieties. The Dorset form differs from any variety that I am acquainted with in some slight particulars, though very like at first sight the more typical form of *R. sepium*, Thuill., which I found two years ago on the Hampshire Downs. How the rose came to be established on the Melbury Downs is open to question. All the evidence is against its being an introduction by the hand of man; the locality is at a distance from hedge or cottage, where there could be no object in planting it; nor is this a rose suitable for hedges. If introduced it will have been by the agency of birds, the heat of their bodies doing no injury to the hard seeds of hips and haws, holly berries, yew berries, and the like, probably rather assisting more or less the process of germination. There is, however, no reason why the rose should not be a survival rather than an introduction; it is certainly native on a similar formation in South Hants, and presumably so in the adjoining county of Wilts.

Galeopsis intermedia, Villars, *G. Ladanum*, Linn. Herb. (Fries Herb. norm.). Some explanation is necessary as to nomenclature. The narrow-leaved Hemp-nettle of chalky cultivated fields, which is well distributed in England and common in some parts, has usually been called *G. Ladanum*, Linn. It stands so in the Flora of Dorset (1st Ed.); and also in the 7th Ed. of the London Catalogue, where *G. intermedia*, Vill., is placed as a variety under it. In the 8th Ed. Lond. Cat. the common form appears as a species under the name *G. angustifolia*, Ehrh. *G. intermedia* disappears, and is replaced by the old name *G. Ladanum*, which, however, now stands for the rare plant and not the common one. Apparently the existing specimen in the Herbarium of Linnæus is *not* our common plant, but identical with the rarer form *G. intermedia*, Villars. The common form, the narrow-leaved Hemp-nettle, has been long known for the county. It is the rarer plant that I now put upon record, the *G. Ladanum*, L., of the 8th Ed. Lond. Cat., the *G. Ladanum* var. *intermedia* of the 7th Edition. It differs chiefly by having a more glandular inflorescence, broader leaves, rounded instead of

cuneate at the base, and more regularly serrate. My specimen was gathered two years ago and rightly named at the time, though I did not till lately realise that this sub-species (as Syme considered it) was only on record for Moray and Denbigh. It is probably not indigenous in either of these localities any more than in Wallis Down, near Bournemouth, where I found my specimen, on ground that was formerly part of the heath; but, like many other corn-field weeds that seem quite at home now, it was probably introduced at some time or other with foreign seed.

My next plant is a Pond-weed, which is given in the London Catalogue (8th Ed.) as a species, 1490, *Potamogeton decipiens.** In the 7th Edition it was given as a variety of *P. lucens*. In Bab. Man. it stands as a species; in Hooker's Student's Flora as a sub-species under *P. lucens*. As a matter of fact it is none of these, but a hybrid between *P. lucens*, to which it bears a good deal of resemblance, and *P. perfoliatus*, two of the commonest species in our rivers. It may easily be distinguished from the former by the sessile leaves, and from the latter by the much longer leaves which do not clasp the stem. It occurs in the R. Frome above Wareham, a little to the west of the railway bridge, where the Swanage line crosses the river. There was no sign of it in the R. Piddle at Wareham, though both parents grew frequently together. The Dorset plants seemed to be fruiting fairly well, but from the way in which the fruits have shrunk in drying I doubt if they were effectually fertilised, or would have had any vitality. It is, of course, usual with hybrids for the seeds to be more or less imperfect; sometimes the ovules show no development; more commonly there is an apparent maturing of the ovules to a greater or less extent; and this is what had taken place in the Wareham Pond-weed. In some other examples of *P. decipiens*, *e.g.*, specimens I once gathered in the canal at Navan, and specimens brought me this last summer by the Rev. R. P. Murray from a canal near Bath,

* After this paper was written the President of the Society informed me that he had previously observed this Pond-weed in the R. Stour,—E. F. L.

perfect seeds had to all appearance been formed; and the fruit is usually described as being much the same as that of *P. lucens* (one of the reputed parents). How the pollen is carried from one plant to another has not been ascertained; but if the whole genus is correctly stated to be *proterogynous*, *i.e.*, if the female organs are developed before the male organs, the flowers would in no case be self-fertilised; and the wind would probably be the agent that conveyed the pollen from flower-spike to flower-spike; and there would be no more difficulty on this score in the cross-fertilisation of one species by another species than in the legitimate fertilisation of one species by its own pollen. The genus has received much close attention in recent years, and one fact that has clearly been established is that natural hybrids abound among the Pondweeds.

Perhaps the most interesting of the additions made to the Dorset Flora during 1893 is the little sedge *Cyperus fuscus*, L., an insignificant marsh plant, with nothing showy in the way of a flower, but interesting on account of its extreme rarity in Great Britain. As it is distributed over the greatest part of the Continent of Europe, being found from Portugal to middle and South Russia, and from Denmark and Belgium to the shores of the Mediterranean and the Levant, it is rather remarkable that it should be almost absent from a well-watered country with abundance of suitable marshy places like the British Isles. For many years only one single station has been known for it in these Isles, a wet common in Surrey. There was a time when it also grew in Chelsea, but there it was believed to be naturalised, and is now extinct. So that the Shalford Common station was the only one where there was any claim for the *Cyperus* to be considered indigenous. Late in August last the Rev. W. R. Linton detected it, when out botanising with the Rev. R. P. Murray and myself, near Ringwood; there was no great quantity, and it appeared to be confined to one small spot of ground. Having become familiar with the look of the plant I naturally thought of it when I came across some interesting marshy bits of land a few days later about Bere

Regis; there was the same sort of herbage growing in the marsh, and after some research I was repaid by the discovery of several plants of the *Cyperus*. A fortnight later I was in the same neighbourhood, and in the course of a walk I saw it again a considerable distance from the first station, one plant being of unusual size, and bearing, I should say, from 20 to 30 stems, each with their cluster of fruit.

There is no need for me to describe here the features of this interesting sedge; it is well described in existing manuals. The importance of the discovery is not merely in the addition of a good plant for the county, but in the testimony to the indigenous character of the species. It has been argued that a rare plant, which has only one station, was probably introduced; and that, therefore, it is likely that the plant on Shalford Common was introduced. Now we find a thoroughly native station in Dorset, and another in Hants; consequently the doubt which some have entertained regarding the Surrey station is removed.

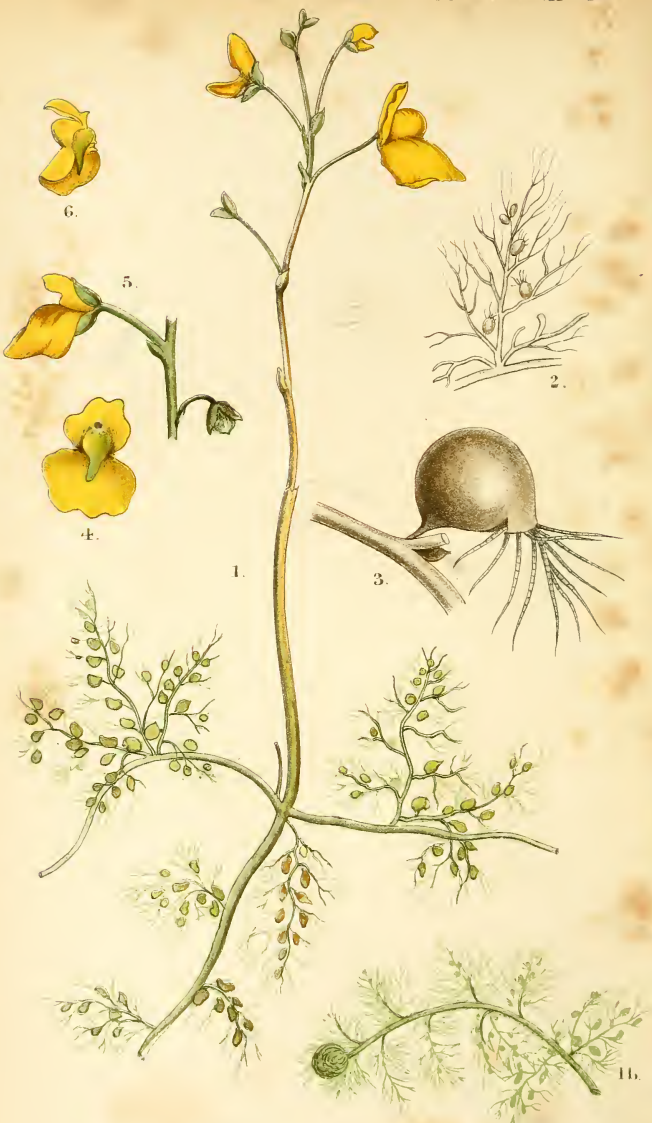
Two more interesting plants belonging to the *Cyperaceæ* have been added to the County Flora during the past summer, both of them species that were already recorded for Hants. One is the rare Cotton-grass *Eriophorum gracile*, Koch (non Sm.). Oddly enough this species was discovered only just in time to be entered in Townsend's Flora of Hants, some ten years ago; and there is a very good account of it in one of the Appendices to that work. And now it has turned up in Dorset just in time to appear in an Appendix (though not in its proper order) in the forthcoming Flora of Dorset. Having already during the month of May taken the opportunity offered by the dry season of penetrating farther than before into some of the bogs of the New Forest and gathered *E. gracile*, Koch, on three occasions, I had become familiar with its facies, and formed the opinion that it ought to be found in this county also. I was almost disappointed that in so likely a locality as Morden Decoy this species declined to appear, though Cotton-grass abounded. But in the neighbourhood of Littlesea last June, after examining

the Cotton-grasses of more than one bog in vain, I detected a fair quantity of the right plant, first in a little swamp where I needed my companion's hand (Mr. E. M. Holmes) to reach it without disaster, and soon after on ground where it was possible to stand without discomfort or trepidation, so much was the bog dried up. At this spot *E. gracile* and the common species, *E. angustifolium*, were growing together, so that at a little distance it was doubtful which species was before us. When close at hand there was no difficulty in distinguishing the two plants. *E. gracile*, Koch (which must not be confused with *E. gracile*, Sm., a slender and small form of the common species), is not only more slender, but usually rather taller than average *E. angustifolium*; the peduncles are clothed with short pubescence; the glumes are greener when young and eventually a lighter grey; the tuft of cottony hairs is much narrower and neater, having the look of a paint brush from the tuft being rather truncate at the end; and the nut is narrower and of a brownish-grey. It usually grows in deep watery bogs, where there is no firm bottom for 2-3 feet, sending out slender ascending suckers, which have leaves only at first, but become flowering plants the following year; and generally the pressure of the foot is enough to submerge, gradually or more precipitately, the soaking fibrous mass in which it roots.

The other Cyperaceous plant I referred to is *Carex filiformis* L., which was observed last May at Morden Decoy by the Rev. R. P. Murray and myself. The day we were together scarcely any but barren plants met our view; these were abundant, but were insufficient to name the plant with certainty. A few days later I searched other parts of this extensive bog and met with the *Carex* abundantly, and on this visit procured several fruiting spikes. As this *Carex* is found in Devon, Hants, and Somerset it was to be expected in Dorset; its distribution in England farther north is curious; four counties in East Anglia,then from Stafford northwards; I have gathered it in Skye and on the north coast of Sutherland. There is a likeness here to the distribution of *Carex limosa*, which is also rather abundant in Morden Decoy. This is

chiefly northern in Britain, extending from Shropshire northwards, but has one or two habitats in Dorset, Hants, and in Suffolk.

Carex filiformis is placed near one end of the long list of species belonging to this genus. Its nearest ally is *C. hirta*, L., a much commoner sedge, found in nearly all counties except the extreme northern. Both have a fruit that is clothed with short appressed hair and of somewhat similar structure; but that of *C. filiformis* is narrower, and the habits of the two plants and their leaves are totally different.



M & S. Hanbury del

Mintern Bros. imp.

UTRICULARIA NEGLECTA.

EXPLANATION OF THE PLATE.

1. Portion of plant of *Utricularia neglecta*, Lehm., with the branches cut short.

1*b*. Termination of branch of ditto, forming winter-bud.

2. Leaf of ditto (magnified).

3. Bladder (highly magnified).

4. Detached flower of ditto, looked at from behind. (The orifice, into which the ovary fits, should be circular).

5. Part of the scape of *U. vulgaris*, Linn., with flower and fruit.

6. Detached flower in profile of *U. intermedia*, Hayne.

The lady who has done me the favour of making the drawing, and the engraver, have done admirable work under very adverse circumstances. The unfavourable season of 1894, which made it impossible to get a satisfactory specimen for a model, is alone to blame for any imperfection that may be detected in the flowers. E. F. L.

British Species of Utricularia.

(Illustrated by Dorset Specimens.)

By Rev. E. F. LINTON.

UP to the date of writing this paper Hampshire is the only county for which the four species of British Bladderworts have been recorded—viz., *Utricularia vulgaris*, L., *U. neglecta*, Lehm., *U. intermedia*, Hayne, and *U. minor*, L. Several counties have been known to produce three of these, among which was Dorset. Having during August last seen a good quantity of *U. neglecta* in S. Hants, my brother, the Rev. W. R. Linton, and myself looked for it in Dorset in the marshy meadows near Wool, where *U. vulgaris* was said to grow. The first Bladderwort my brother detected proved on investigation to be *U. neglecta ;* and it was natural to suppose that it was this species which had previously been gathered at Wool as *U. vulgaris*, as these two are sometimes confused. A little later we met with some fine specimens of *U. vulgaris* in one of the smallest trenches of a water meadow ; and we had the satisfaction of knowing that Dorset, as well as Hants, possessed all four species.

It is unusual for these two species, *U. vulgaris* and *U. neglecta*, to grow in the same locality. They are made to do so, I am aware, in the Hants Flora, where they are said to occur over

the same ground in District II. But the notes regarding *U. vulgaris* in that district are of a date when *U. neglecta* had not been well discriminated, at least for the county; and, after investigation, I am of opinion that all the so-called *U. vulgaris* given for District II. is the other species. The fact that all the plants sent to Darwin as *U. vulgaris*, to aid his investigation of Insectivorous Plants, and collected from Sopley and Bisterne in District II., were found to be *U. neglecta*, is evidence of such confusion having taken place.

It is my object in this paper to give some account of each of the four species, and to include a description of each. This will not be altogether a work of supererogation; for one of them, *U. intermedia*, Hayne, is very rarely seen in flower; so rarely that many excellent Herbaria which possess sheet upon sheet of its foliage have been utterly devoid of a flower-spike hitherto, and Boswell Syme, when he wrote the part of English Botany containing this genus, had never seen a flowering British specimen. (Syme, E.B., vol. vii., p. 129.) It is probable that the prolonged drought and accumulated heat of the spring and summer of 1893 had for one of its many curious results the effect of generating the flower of *U. intermedia*. In both June and August I saw it flowering freely in two localities in this county; and I have thus had the good fortune to observe all four Bladderworts in flower, within a short period of time.

Before taking the species seriatim I will recapitulate what has been observed in recent times about the bladders which give the name to the plants. Up to about the year 1875 the bladders, which are attached to the leaves in some species, to barren branches in another, were generally supposed to exist for the purpose of raising the plant to the surface of the water for the flowering period, by the air they were supposed to contain. In Syme's English Botany (ed. 3., vol. vii., p. 126), I read: "The name of this genus of plants is derived from the Latin word *Uter*, and signifies a little bottle, or bladder, or vesicle, referring to the appendages of this sort on the stem and leaves of the species,

causing them to float on the surface of the water." In 1868 a Mr. Holland announced that he had observed minute water insects in the bladders; this led Charles Darwin to study their uses and structure with great care, and the results of his observations were published in his "Insectivorous Plants" in 1875, he being just anticipated by Professor Cohn, who had been engaged in similar researches and had come to much the same conclusions. Darwin found that the bladders did not contain air, but water, or at most a few casual bubbles. Consequently their final cause could not be to float the plant. Crustaceans were commonly found by him in mature bladders, and sometimes other minute creatures. The bladder, which was shaped like a flattened oval flask, only with the lower edge straight, was a sort of trap, furnished with a very delicate transparent valve at its mouth, and with a few small bristles, resembling the antennae of an insect, also about the mouth, which seemed to be for the purpose of guiding crustaceans to the entrance of the trap. The interior of the bladder is coated with elongate papillae, arranged in fours and in pairs, which are capable of suction; and Darwin succeeded in proving that the bladders imbibed the juices of the decaying crustaceans, which were soon asphyxiated by their confinement in the trap, and this ministered to the nutriment of the plant. The Bladderworts (at least in this country) have no root; the bladders therefore carry on the alimentary functions that roots perform in other plants, and feed on microscopic garbage. It is noticeable that the British species are inhabitants of remarkably foul ditches or putrid bogs.

Utricularia vulgaris, L. Stems, 6-18in. long, leafy throughout, usually simple, terminating in stout winter buds; leaves deltoid-ovate in outline, spreading alternately in different directions, sessile, trifurcate from the base, branching 3-4 times, segments linear with fine marginal bristles towards the extremities, and bearing bladders $\frac{1}{6}$in. long shortly stalked; scape erect at first, then elongating procumbent and flexuous (6-14in.), 3-12 flowered; bracts oblong olive green often bifid; pedicels dotted erect in bud recurved in fruit; calyx pale olive green, half as long as the pedicel, lobes

spreading in fruit, upper longer ovate-acuminate, lower broadly ovate 2-toothed; corolla, ½in. vertically and across, two-fifths to ¾in. long, medium yellow; upper lip suborbicular about equalling the long much inflated palate, which is marked with imperfectly anastomosing orange-brown striae and slightly downy towards the throat; lower lip with broad margin reflexed at right angles all round, often touching and even enclosing the spur; spur nearly straight parallel with the lower lip, very obtuse, with few purple-brown striae forming strongly-marked angles at their junction; flower-bud glandular rather angular, the twisted corolla forming a blunt 2-dentate cone; stigma broadly ovate, ciliate, sensitive; capsule one-fifth inch diam., style persistent.

The Greater Bladderwort is not so common as the specific name *(vulgaris)* would suggest. It is indeed distributed through the country, being known for 42 English and Welsh counties and some 18 or more Scotch. But it is very local; for instance, Herefordshire had but a single locality, and there the plant is extinct. And it remains to be seen whether *U. neglecta* is not the plant that has been recorded as *U. vulgaris* in some cases—a mistake which is known to have occurred. Not that the two plants would easily be confused if both were seen and compared in the fresh state. But, as I have said, they are rarely to be found near one another; and in the herbarium, when the delicate flowers have lost their shape, some of the principal points of difference usually disappear. *U. vulgaris* has larger and greener bracts and sepals, the pedicel is stouter as well as shorter, and usually recurved in fruit; the flower is less showy, the upper lip shorter by a little, only about as long as the palate, the palate is rather larger and more prominent, and the broad margin of the lower lip is sharply deflexed, hanging down like a rigid curtain or vallance on both sides and in front, and usually enclosing and even concealing the broadly conical spur between the two flaps. The spur is on the whole blunter; but this is a character which varies a good deal in both species, and is not of much use for discrimination. In bud the flower of *U. vulgaris* is twisted into a very blunt or subtruncate

cone, which terminates in two short points. The stigma, which consists of two lobes or flaps in the genus, is sensitive and ciliate in this species; the two lobes, which are spreading when mature, slowly approach one another and close up when gently touched.

U. neglecta, Lehm. Stems 6-24in. long, leafy throughout, branching rather freely, branches terminating in rather slender winter buds; leaves alternately spreading in different directions, orbicular in outline, branching 2-3 times, segments capillary distinctly furnished with a few marginal bristles near their extremities and bearing shortly stalked ovoid bladders, $\frac{1}{8}$in. long when fully developed; scape much as in *U. vulgaris*, 3-10 flowered 4-10in. long; bracts ovate-oblong or oblong-acuminate olive transparently scarious; pedicels 4-6 times as long as the calyx, rather slender, purplish, erect-patent in flower, straight in fruit; calyx olive-brown membranous striate, upper lobe oblong subacute, lower orbicular-ovate notched; corolla $\frac{1}{2}$in. or more vertically and about $\frac{1}{2}$in. long, bright medium yellow; upper lip erect ovate-oblong about twice as long as the projecting palate, deeply channelled above, edges incurved; palate much inflated, channelled, marked with orange-brown usually simple striae; lower lip $\frac{3}{4}$ to 4-5in. across with broad margin spreading horizontally and waved; spur subacute or obtuse pointing downward and forward, diverging from the lip, with few dull purple-brown striae forming faintly coloured angles; buds glandular, the twisted corolla forming a very acute cone; stigma not sensitive, upper lobe papillose on the inner surface.

U. neglecta was given by Watson for six English counties (Topogr. Bot. Ed. II.) and no Welsh or Scotch. Since the issue of that work it has been discovered for both Scotland and Ireland; but it cannot be said that its distribution has yet been worked out. It is still regarded as a rare plant. It may be best distinguished from *U. vulgaris* by its more showy flowers with the broad margin of the lower lip spreading horizontally; the palate is small in proportion, and is exceeded $1\frac{1}{2}$-2 times by the projecting upper lip. The flower is twisted in bud into an acute cone, nearly parallel at

first with the direction of the spur, but divergent (nearly to the extent of a right angle) before expansion. The pedicels are slender, long in proportion, and usually straight or nearly so; erect or ascending in fruit (not recurved). The sepals and bracts are smaller and of a browner green. Flowerless specimens may be distinguished by the usually smaller (and more numerous?) bladders upon the leaves, the more slender leaf-segments, and the stems being more disposed to branch than in *U. vulgaris*. It struck me, in the specimens gathered last summer, that it was more easy to shake the leaves of *U. neglecta* out of the pencil which their segments form when drawn from the water, and that the winter buds in their early stages were more slender, than was the case in *U. vulgaris*.

These numerous points of difference sufficiently show that these two are good species, though superficially, and especially in the herbarium resembling one another, and in the past often confused.

Reichenbach has given a leaf-distinction, which I have not succeeded in verifying, or finding confirmed by other observers. He says that the serrations of the young leaves of *U. vulgaris* bear a fascicle of bristles, while those of *U. neglecta* have but a single bristle, and he doubts whether the single bristle is always present (Icon. Fl. Germ. et Helv. xx., p. 113, tab. 1822, 1824).

Utricularia intermedia, Hayne. Stems more or less branched, bearing large bladders on longish slender stalks or small branches, and producing here and there terminal leafy shoots devoid of bladders, terminating in hirsute winter buds; bladders $\frac{1}{6}$-1-5in. long (sometimes almost $\frac{1}{4}$in.), usually very pale; leaves $\frac{1}{4}$-$\frac{2}{3}$in. long, roundish (eventually pointed) in outline, spreading regularly and nearly in one plane, trifurcate at the base, then branching alternately, rarely bearing a casual bladder, segments linear-acuminate, often rather broad, dentate towards the extremities; scape, 2$\frac{1}{2}$-4in. curved below, but erect $\frac{2}{3}$-$\frac{3}{4}$ of its length, 2-3-flowered, with one detached amplexicaul cordate-acuminate bract; pedicels $\frac{1}{4}$-$\frac{1}{3}$in. long, decurved at the top, exceeding their bract; calyx pale green, lobes ovate to ovate-acuminate concave; corolla $\frac{1}{2}$in. (as

long as broad), deep golden yellow, twisted in bud into a very acute cone ; upper lip slightly concave and arching, twice as long as the palate ; palate very prominent, folded, with purplish-brown striæ ; lower lip broad, spreading, broader than long ; spur conic subacute curving in towards the lip ; stigma very unequally lobed, upper lobe very small, lower broadly lingulate.

The distribution of this species is very curious ; putting aside doubtful records, it skips the whole of central England, excepting Norfolk, and from Dorset and Hants in the south is unheard of till we reach the three northernmost counties ; in Scotland it is more frequent, being recorded in some ten counties ; it also occurs in Ireland, chiefly in the west ; I have seen it plentifully in parts of Galway.

It differs from the two previous species in being much smaller in nearly every respect ; in the disposition of the bladders (which are exceptionally large for the plant) upon branches which are leafless, or nearly so, in the neighbourhood of the bladders, though often prolonged into terminal leafy shoots ; in the distichous arrangement of the leaves, which lie almost in one plane and bear no bladders. The inflorescence is very similar to that of *U. neglecta* only on a smaller scale ; the pedicels are indeed shorter in proportion, and the spur more acute, but in the twisting of the flower in bud, in the relative length of upper lip and palate, and in the spreading margin of the lower lip, there is a close resemblance to the floral characters of *U. neglecta*. The remarkable feature of the bladders being borne on the leafless part of the branches may, I think, be accounted for in this way. They are usually found on the parts which burrow in the loose peaty mud of the bog, which is in a semi-fluid state ; consequently they are usually of a pale, whitish hue, and semi-transparent before they get clogged with the *debris* of their animal food. The same burrowing propensity prevents the development of perfect leaves, which are only to be found on the branches that lie exposed to the light on the surface of the submerged mud. These perfect leaves are sessile and trichotomous from the base. The bladders, each on a slender stalk

of varying length, are sometimes supported by a short bract or leaf segment, sometimes by two; these bracts or leaf segments are simple or bifurcate, suggesting the idea of a reduced leaf; and a little consideration shows that the bladder is in fact occupying the place of a suppressed leaf, the one, or two, bracts at the base of the bladder stalk representing the other divisions of a perfect trifurcate leaf. Darwin convinced himself that *U. neglecta* and *U. minor* were nourished on the juices of different crustaceans, suited to their respective powers of digestion; no doubt *U. intermedia* also has its particular fancy, and searches for its prey amid the decaying filth of a peaty bog. This habit is by no means surprising when compared with the life of a South American species, *U. montana*, which is more or less Epiphytic and permeates rotten wood and decaying mosses or loose earth with its rhizomes, which bear numerous minute bladders filled with water and provided with delicate apparatus fitted to ensnare unsuspecting animalcules and exclude undesirable rubbish!

I will treat the remaining British species briefly, partly because I can add little or nothing in the case of a plant that is already so well known; partly because there is little likelihood of its being confused with any of the three already noticed.

U. minor, L. Stems very slender, usually little branched, more or less leafy, rarely bearing some few bladders independently of the leaves, and terminating in small glabrous winter buds; leaves $\frac{1}{8}$-$\frac{1}{4}$in. broad, broadly orbicular, trifurcate at the base, trichotomously multifid in linear acute segments, with no bristly hairs towards the extremities, but bearing small obovoid bladders; scape 2-6in., very slender, erect or nearly so, purplish above, 2-3 bracteate, (below the inflorescence), 3-10 flowered; pedicels 1-5-$\frac{1}{3}$in. long, reflexed after flowering, 2-3 times as long as the calyx; calyx purplish-olive; lobes ovate, deeply concave corolla about $\frac{1}{3}$in. long, pale lemon yellow, twisted in bud into an acute cone; spur short obtuse, about as broad as long; upper lip spreading waved, not arching, notched, as long as the raised horseshoe-shaped palate, margins of broadly ovate lower lip deflexed; stigma lobe subacute.

Recorded from 32 English and Welsh counties and some 17 Scotch, this interesting little plant is widely distributed, from the extreme south to the extreme north of Great Britain. It cannot easily be mistaken for any of the preceding: its small size, its lemon-coloured flowers, the reduction of the spur to a broad bluntly conical hump, about as broad as long, mark it unmistakeably. The bladders, which are very small, are usually borne upon the leaves, but may also be found, one or two together, upon slender stalks direct from the stem, without any sign of leaf; and are in that case pale in colour as if from burrowing in the loose mud (after the fashion of *U. intermedia*). It opens one's eyes to the wonders of the infinitely small in the animal world to learn that the tiny bladders of *U. minor* have been observed to contain a greater number of crustaceans than the larger bladders of *U. neglecta*. Darwin gives ten as the maximum counted in a bladder of the latter species, but records 15, 20, even 24, as having been observed in a bladder of *U. minor!*

A fifth species has been for many years suspected as British and claimed as such—viz., *U. Bremii*, Heer. But as the distinctions lie chiefly in the flower, and the flower of the supposed British plants has never been found in this country, it is needful to wait for further evidence. *U. Bremii* seems to come very near *U. minor*, differing from it in the more robust habit, the more pointed conic spur, and the lower lip orbicular, spreading. There is little in the description to separate these two as distinct species.

Reptiles of Dorset.

By Rev. O. P. CAMBRIDGE, M.A., F.R.S., &c., &c.

Read at the Field Club Meeting, Dorchester, March 15th, 1894.

[With Plate.]

IN Vol. xvii. "Zoologist" 1893, p. 174, a catalogue is given by Mr. Miller Christie, F.Z.S., of "Local Lists of British Mammals, Reptiles, and *Fishes*," arranged under counties, and he gives lists from numerous counties in England and Wales. As respects Reptiles the only lists that appear ever to have been published of those of the county of Dorset are—(i.) "A catalogue of the Reptiles found in Dorsetshire" (written by the late Mr. J. C. Dale and published in 1837 in "The Naturalist,"* Vol. ii., p. 182), containing a record of only *seven* species; (ii.) A list given by Mr. C. W. Dale of *eight* species in his "History of Glanvilles Wootton," p. 37, published in 1878.

The number of species now recorded in Dorsetshire is thirteen, including the "Leathery Turtle," *Sphargis coriacea* (Dumeril et Bibron). Only two other species of Reptiles are at present

* "The Naturalist" (Neville Woods), Vol. ii., pp. 182-183, London, 1837.

recorded as British—viz., the Edible Frog, *Rana esculenta* (Dum. et Bib.), and the Hawksbill Turtle, *Chelonia imbricata* Schweig; Dorsetshire, therefore, can boast of nearly all the known British Reptiles. No other county can at present furnish a much more imposing list, even if any one has so many species certainly recorded within its limits. * It may be remarked here, however, that the number of Reptiles found in Great Britain is but scanty when compared with those found on the Continent of Europe. The European Reptilia number at present a total of about one hundred against the meagre fifteen species of Great Britain. The *Lizards* of Europe are thirty-seven as against three British. The *non-venomous Snakes* eighteen or twenty as against our two British species, and the *venomous* ones four against our one; while as against our four species of the *Frog* group the Europeans count nineteen; the three British species of *Newts* being represented in Europe by seventeen. Some of us may perhaps be inclined to think that this comparative paucity of the reptile class in Britain tells in her favour as an abode of the human species; but still, though one can scarcely covet the additional European venomous Reptiles, yet all who in their researches love to see every corner and crevice of the face of Nature peopled with many and varied animal forms will, I think, agree that a few more of the lively lizards and harmless snakes would increase the pleasure of our summer rambles. In addition to these general remarks, perhaps this is the best place to refer very shortly to one or two (I am almost inclined to call them) superstitions in respect to some of our Reptiles. I allude first to the asserted habit of the adder, when alarmed, of swallowing its progeny; or rather, I suppose I should say, of the young, when alarmed, of bolting down their mother's throat. I have often seen this stated in print in a very clear and circumstantial way, but though I have in my time known intimately and personally a great many zealous field-naturalists

* Carnarvon has a list of 13 species; Devonshire, 15 species; Somerset, 12 species; Yorkshire, 12 species. (See Mr. Miller Christie's catalogue.)

and observers I have as yet never come across one who could assure me, without the possibility of a doubt, that he had seen this occur. I need scarcely add that I have never witnessed it myself, and I confess that I am still very sceptical on the point. Another superstition I would refer to is the finding of toads imbedded in solid blocks of wood or stone. This has also been often very circumstantially testified to in print, and by eye-witnesses (whose testimony on such a point can, however, hardly be said to be quite above suspicion), such as that of quarrymen or others who had something to look for in the way of reward, or notoriety from the detail of the marvellous. Neither in this case has it ever been my lot to come across anyone who had ever seen a toad dis-entombed from a piece of stone or rock. I have understood that a considerable reward has more than once been offered to quarrymen or others (who had asserted the occurrence of toads in solid stone as not unfrequent) to produce at once the toad and the portions of rock which encased it, but that in no case has the reward ever been claimed ; in fact, I think it may be said that no unimpeachable evidence has ever yet been offered to prove such an occurrence. Other superstitions in connection with Reptiles (notably toads) belong rather to "Folk-lore" than to Natural History, and I fancy that our past Vols. of the Field Club Proceedings contain accounts of such from the able pens of Mr. J. S. Udal and others, so I need not allude to them further here. I would therefore only mention that out of the thirteen recorded Dorset species of Reptiles I find twelve in the parish of Bloxworth alone.

CLASS REPTILIA.

ORDER *TESTUDINATA *(Tortoises and Turtles)*,

* I am told by our Secretary, Mr. Richardson, that in 1887 or 1888 a specimen of *Chelonia viridis*, the green or edible Turtle, was found dead in the West Bay. (See Proc. Dorset N. H. and A. F. Club x., p. 170.) The shell of this is in our Museum, but it can hardly be placed in our list of Dorset Reptiles, as it may have been one that died on board ship and was thrown overboard *en route* from the tropics, or perhaps it may have been washed over here after a natural death.

SPHARGIS CORIACEA, Dum. et Bib.

Leathery Turtle. Bell's British Reptiles, 1849, p. 12.

This species reaches a weight of seven to eight hundred pounds, and measures eight feet in length. Mr. Bell, on the authority of Pennant, records one taken on the coast of Dorsetshire and deposited in the Leverian Museum. Bell adds that he believes this specimen to be now in the British Museum.

ORDER SAURIA.

FAM. LACERTIDÆ *(Lizards).*

LACERTA AGILIS, Linn.

Sand Lizard. Bell's British Reptiles, p. 18.

The length of this reptile often reaches seven inches or slightly over. It is a beautiful species and probably well known to most of our members who live in or near the heath districts. Its colour varies from bright green to dark rich brown, their hues being often intermingled in parts of the same individual, and always marked with numerous bright white or yellowish spots margined with black. In capturing this species care should be taken not to hold it by the tail, as it at once endeavours to get free by stiffening and snapping the tail off. A new tail will in time grow from the stump, but it is always of a more stumpy form than the original one, and its junction is plainly visible. I have frequently come across individuals with such stumpy tails, and have conjectured that they may have been lost in escaping from their enemy, the Smooth Snake *(Coronella lævis)*, which appears to feed upon this lizard. (See Proc. Dorset N. H. and A. F. Club, Vol. vii., p. 88.)

This species may be kept alive in confinement. I have had them in a glass case, with heather and grass on its floor, for months together, feeding them with flies and other insects and keeping a small saucer always full of water in the case, though I cannot say that I ever saw one drink. They are very pretty objects when basking in the sun, but with those kept in confinement I was not

able to make any observations of much interest in respect to their ways and habits.

The Sand Lizard is not a rare species in many parts of the Dorset Heaths. As a rule those examples found on the high and dry part of the heath are browner than those found in lower damp grassy parts; an evident adaptation to the surrounding colour, and no doubt protective.

ZOOTOCA VIVIPARA, Dum. et Bib.

Viviparous Lizard. Bell's British Reptiles, p. 34.

The smaller size, more slender form, and duller colours of this lizard will easily prevent its being confounded with the preceding *(L. agilis)*. As its name implies, it produces its young alive, not like the preceding, laying eggs which are afterwards hatched, but producing the young just after the shell (or rather membraneous envelope) bursts within the female. Its length is from five to six inches, and although I have never found it in any abundance it is not unfrequent in all the parts I have rambled over in Dorsetshire. It appears to be distributed generally through England, being also found both in Scotland and Ireland.

ANGUIS FRAGILIS, Linn.

Slow-worm. Bell's British Reptiles, p. 41.

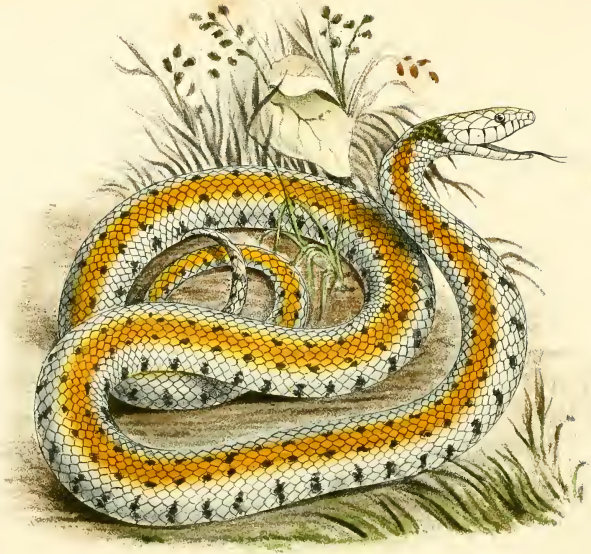
No description is needed of this common and (so far as Europe is concerned), almost universally distributed reptile. Although destitute of limbs it is in its essential characters nearer to the lizards than to the snakes. Though perfectly harmless it is almost without exception disliked, and often superstitiously feared by English country folk. I have rarely come across a Dorset country-person who would not, if it were possible, destroy a slow worm. It varies considerably in size—from 10 to 14 inches—and, like the last species (*Zootoca vivipara*), its young are produced alive.

ORDER OPHIDIA.

FAM. COLUBRIDÆ *(Snakes and Adders).*

NATRIX TORQUATA, Ray.

Common or Ringed Snake. Bell's British Reptiles, p. 49.



F.O.P Cambridge del. et pinx.

Mintern Bros. Chromo.

NATRIX TORQUATA

Ring snake. — Variety.

The common snake is too well known to need minute description. Its generally greenish olive-grey hue with the bright yellow transverse marking close behind the head, brought into greater relief by the black patch which adjoins it, make it conspicuous at a glance to the most ordinary observer. It could only be confused in England with our other two species, the Smooth Snake *(Coronella lævis)* and the Adder *(Pelias berus)*, and from each of these the yellow ring behind the head at once distinguishes it. It is common throughout England, and in some localities very abundant. In my own district of Bloxworth it comes up from the woods and heaths in considerable numbers every summer to deposit its eggs in fermenting heaps of dead leaves and other vegetable refuse. It appears to possess an instinctive knowledge of these heaps, as at a distance of two or three fields I have seen them emerging from the woods and making their way in a direct line for them. The common snake varies considerably in length; the largest I ever met with myself was on Bloxworth Heath, and measured exactly 4ft. 2in. in length. I have a variety, found on Bloxworth Heath, of which I give here a figure,* and which I imagine to be unique. It is of a uniform pale whitish colour, with a well-defined broad longitudinal central dorsal pale yellow-brown band. No trace of the characteristic yellow ring at the back of the head was visible.

CORONELLA LÆVIS, Boie.

Smooth Snake. Clermont, European Reptiles, p. 224, sub. *Coluber Austriacus*, Dum. et Bib. Cambr. Proc. Dors. N. H. and A. Field Club, 1886, Vol. vii., pp. 84—92, pl. vi.

In a former volume of our Proceedings I have given a figure as well as a full description and account of this species, so that it is not necessary to do more than allude to it here in general terms.

* The figure given of this variety has been kindly drawn for me by my nephew (Rev. F. P. Cambridge). The position of the snake is taken from the figure of the common snake in Bell's "Reptiles of Great Britain," being that in which the peculiar variation in colour could be most clearly and fully represented.

It was first discovered in England, by the late Mr. Frederick Bond and myself, between Ringwood and Wimborne in 1853 but was only recorded as British in 1859. It is not unfrequent on the Dorsetshire and Hampshire Heaths, where it is often mistaken for the adder and suffers accordingly. It is of a browner hue than the common snake, and so far bears a superficial resemblance to the adder, but it lacks the conspicuous central longitudinal zigzag or lozenge-shaped dark-brown or blackish band on the back of the latter, and is of a more slender form. Its length is from eighteen to twenty-five inches, and it is probably ovo-viviparous.

PELIAS BERUS, Dum. et Bib.

Adder. Bell's British Reptiles, p. 61.

This well known and justly feared reptile varies much in colour, ranging from a pale greenish hue to dark brown, black, and red-brown; but the longitudinal row of rough diamond or lozenge-shaped dark markings along the back will always serve to distinguish it from either of our other two indigenous Ophidians. Its poison may well be dreaded, for although fatal results from its bite are, I believe, rare, yet they are often exceedingly serious. The effects of the adder's bite depend in great measure, no doubt, upon the season of the year, and on the condition of the patient's general health and constitution. Although found generally throughout England and Scotland, it is far less common in some localities, even in the South of England, than in others. It is certainly not abundant, though frequent in the Bloxworth district, and is found more in the woodlands bordering the heath than on the heaths themselves. Its length is from eighteen to twenty-four inches, and it is ovo-viviparous, the young bursting the egg-envelope in the act of parturition. The trivial name Viper is usually given both to the young, and to the male of the Adder.

ORDER BATRACHIA.

FAM. RANADÆ *(Frogs and Toads).*

RANA TEMPORARIA, Linn.

Common Frog. Bell's British Reptiles, p. 89.

It is scarcely necessary in a list like the present to give much more than the name of such a common and well known reptile as this. Few animals are more remarkable, however, than those of this group in their transformations and some of their habits. One can hardly imagine a subject of greater interest to a lover of Nature than the watching of the gradual change from the earliest tadpole state to the perfect form. The common frog does not seem to be over abundant, but is found throughout Dorset,* as well as England generally, and in most localities, though, of course, moisture, in the shape of river banks, wet ditches, ponds, and pools, as also damp meadows, is essential to its well being. Unlike the toad, which is found in all situations and in favourable weather is constantly on the move crossing roads and pathways in the evening, the frog is more local and needs looking for.

BUFO VULGARIS, Laur.

Toad. Bell's British Reptiles, p. 115.

Everyone knows a Toad by sight—its tumid form, murky colour, warty or tuberculous skin, sluggish movements, neither a walk, nor run, nor jump, but a sottish sort of crawl, with, if hurried, a faint attempt at a hop, often ending in a lurch to one side or a complete roll over. Its habits, though, of course, possessing, like those of all other creatures, an interest of their own, present nothing very remarkable to an ordinary observer. Like the frog

* In his introductory paper to "Papers read before the Purbeck Society," 1855, the Rev. J. H. Austin says, p. 26:—"That he has never been able to ascertain the occurrence of the common frog on the south side of the chalk hills of Purbeck." His information respecting other reptiles in Purbeck is also limited. He only mentions *the Viper* (two varieties of colour—red and ordinary) and two species of Water Eft, but conceives, though he has not any proof, that the Sand Lizard inhabits the Studland and Corfe heaths. I have before me a letter from the Rev. John Bond, of Tyneham, in which he says that there are certainly frogs to be found within the limits mentioned by Mr. Austin, though they are scarce. A few are to be found close to Tyneham, and one of remarkable size and marvellous power of hopping—two or three yards at a time—was seen in a hayfield there during this past haymaking season. The Rev. Charles Wordsworth, Rector of Tyneham, also tells me that the frog occurs in this district, though the toad is the most common."

it passes through very similar transformations from the egg to the perfect animal. Stories of toads found imbedded in substances like wood or stone have been already alluded to. Mr. Bell, in his history of British Reptiles before referred to, treats them, as he does also stories of vipers taking refuge down their mothers' throats, with scant credit, and he mentions the failure of experiments, conducted with a view to testing the truth of the former stories. We can understand a toad being thought an unattractive animal. It certainly is not strictly beautiful, but it is not easy to understand the intense dislike often felt towards them. A gentleman (now no more) of my acquaintance, a man of high education, a great sportsman, and fond of natural history, could never pass by a toad without doing, or trying to do, it some grievous bodily harm, and the way in which he would quite set his teeth and "go for the toad" was a caution. I used to try and reason with him, but soon found that the source of his dislike was too deep to be removed by any attempts at reasoning. It was, in fact, a matter of sentiment far too ingrained for *reason* to reach. This kind of dislike is also, I am afraid, not uncommon also among country people. I have more than once repeated a story, told me by an informant, who (I understood) himself witnessed the occurrence, that some years ago a rustic was found belabouring a wretched toad with a bludgeon, and ever and anon as the blows fell thick and fast the rustic ejaculated, with much concentration of venom in his utterance, "I'll larn thee to be a twoad." Unhappy toad, whose simply being what it could not help being was its great sin!! Was this treatment by way of beating it out of him, or into him? I am not now so sure that the informant who told me this story was really an eye witness of the deed, but I believe it is a true tale, though for the credit of our own county I do not believe it attaches to Dorsetshire, but to a neighbouring county. Wherever it may have been, however, let us hope that the progress and spread of education have rendered, or will soon render, such cases impossible. The free opening of our Museums, either wholly or partially, after the wise example of our own County Museum, will

much help towards this. The Toad is abundant in Dorset, as also, I believe, in most other counties.

BUFO CALAMITA.

Natter-Jack Toad. Bell's British Reptiles, p. 126.

Though recognizable at a glance as a "Toad," the Natter-Jack is more readily distinguished from the common toad by a pale central longitudinal dorsal line. It is much more local than the common toad, but where found it is often, I believe, more abundant. I have myself only met with it in Dorsetshire, in and about a pond on Bloxworth Heath, where, about the year 1850, it was very plentiful. In Lancashire, in and near the numerous ponds among the sand hills between North Meols, Southport, and Formby, I met with it in great abundance. Its croaking at night was very remarkable, being only a second, though, perhaps, rather feeble edition of that of the *Edible frog (Rana esculenta)*, whose uproar robbed me of several nights' much-needed rest when living in a tent between Jaffa and Jerusalem in 1865. I cannot speak from experience about all of them, but I fancy most of this group are noted for tenacity of life; at any rate this is so with the Natter-Jack, as the following instance shows: Having a case of stuffed Herons and other wading birds in course of preparation at the late Mr. Richard Rolls', at Weymouth, I decided to add some Natter-Jacks to it to make it more in keeping with the general aspect of the situation affected by the birds; so from the pond on the heath above mentioned I procured about a dozen Natter-Jack toads and not being aware of any special methods of despatch, administered to each several smart blows with a walking stick, on which they quivered strongly, slowly stretched out their limbs, and became rigid, as though dead; as indeed, I concluded them to be. I congratulated myself on the simplicity and efficiency of my method, and at once packed them in moss and sent them off with instructions as to the stuffing and disposing them in the case. Some time after, calling at Mr. Rolls' shop to see the

progress of the case, he told me that these toads had arrived very lively and certainly not injured in the least; that he had fruitlessly tried several methods of despatching them, and as a last resort had consulted our mutual friend, the late Mr. Wm. Thompson, who advised him to take them to a chemist, and try a dose of prussic acid, Mr. Thompson himself accompanying him. Half a teaspoonful of prussic acid (Scheele's strength) was administered to each toad, but apparently without the slightest effect. While Mr. Rolls, Mr. Thompson, and the chemist were debating upon the next step, a gentleman called in at the shop, and becoming aware of the dilemma, informed them of the only effectual and rapid way of killing these animals—a way of which I certainly was myself up to that time ignorant—that is by opening the mouth and, with a pair of sharp-pointed scissors, dividing the spinal cord at the back of the throat. This method is instantaneous and is to be commended to those who may be obliged at any time to put an end to creatures of this kind. The Natter-Jack is smaller than the common toad. It most probably exists in other parts of the county besides Bloxworth Heath, though I have not myself met with it anywhere else, nor have I received any certain account of its occurrence in other localities. Mr. C. W. Dale, however, tells me he thinks it has so occurred, though he cannot find any reference to it.

FAM. SALAMANDRIDÆ *(Newts and Efts).*

TRITON CRISTATUS, Laur.

Crested or Warty Newt. Bell's British Reptiles, p. 129.

This is the largest and handsomest of our Newts, growing to the length of 6 inches. Its size, dark-blackish hue and bright yellow markings, with (in the spring season) the deep flexible indented dorsal crest of the male, will suffice to distinguish this species readily. It is not rare in ponds and ditches at Bloxworth and in other parts of the county. Like the frog group, the newts pass through various stages of the tadpole form before coming to maturity. I once kept some of this species in a tank in my room,

but they used to come out at night from the water and wander about until confined by a perforated zinc cover to the tank. They are very handsome objects when swimming in the bright clear water among the water weeds and artificial rockwork.

LISSOTRITON PUNCTATUS, Dum. et Bib.

Smooth Newt. Bell's British Reptiles, p. 143.

The smooth Newt is smaller, and though brightly and prettily spotted is paler in colour and by no means so showy a species as the Crested Newt. Its skin is also smooth ; not tuberculous like that of the Crested Newt. This is the species usually, I believe, known as the Eft, or Evet. Mr. Bell (British Reptiles) gives some very interesting notes on the ecdysis, or change of skin, in this species from the observations of my old friend, Mr. James Salter, M.D., F.R.S., &c. The length of the Smooth Newt is not quite four inches, and it is variable in the depth and colour of its markings. It is abundant in ponds and watery ditches at Bloxworth and in other parts of the county.

LISSOTRITON PALMATUS, Dum. et Bib.

Palmated Smooth Newt. Bell's British Reptiles, p. 154.

This is the smallest of our three indigenous species, measuring only about two to two and a-half inches in length. The male is easily recognized by the palmation of the hinder feet (which is greater, however, in summer than in winter), and by a thread-like elongation at the extremity of a slightly truncated tail looking as if the tip of the tail had been laid hold of and the animal had escaped, leaving the fleshy portion in the fingers, and so apparently reduced the tail at that point to a slender stem of vertebræ. The female has little or no similar elongation. It is a pretty little species, though generally less strongly marked than *L. punctatus*. It is not rare in pools on Bloxworth Heath, and was first discovered in this county near Poole, in a pond between Constitution Hill and Kinson many years ago by the late Dr. Bell-Salter. It has been found in a

pool near Bincombe by my son, Chas. Owen P. Cambridge; and I met with it in 1856 in ponds near Durham.

LIST OF SPECIES.

1. Leathery Turtle	*Sphargis coriacea*, p. 93
2. Sand Lizard	*Lacerta agilis*, p. 93
3. Viviparous Lizard	*Zootoca vivipara*, p. 94
4. Slow-worm	*Anguis fragilis*, p. 94
5. Ringed Snake	*Natrix torquata*, p. 94
6. Smooth Snake	*Coronella lævis*, p. 95
7. Adder	*Pelias berus*, p. 96
8. Common Frog	*Rana temporaria*, p. 96
9. Common Toad	*Bufo vulgaris*, p. 97
10. Natter-Jack Toad	*Bufo calamita*, p. 99
11. Common or Crested Newt	*Triton cristatus*, p. 100
12. Smooth Newt	*Lissotriton punctatus*, p. 101
13. Palmated Smooth Newt	,, *palmatus*, p. 101

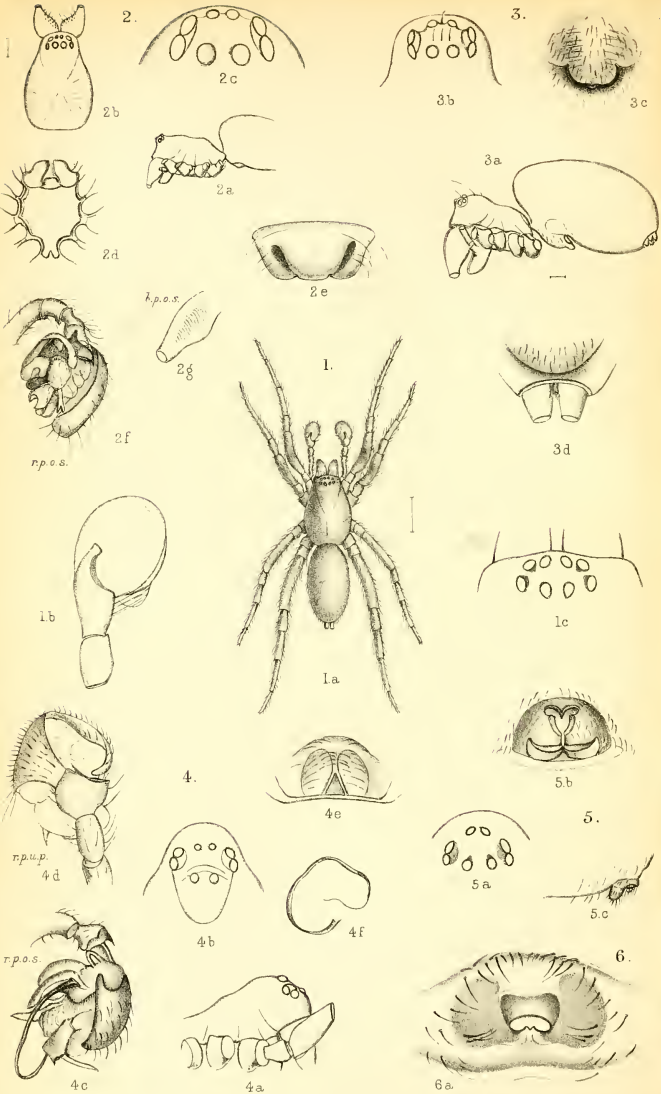
Species recorded by the late Mr James C. Dale, l. c., supra.

1. Lacerta agilis
2. Anguis fragilis
3. Natrix torquata
4. Vipera communis (= Pelias berus)
5. Rana temporaria
6. Bufo vulgaris
7. Triton aquaticus (= T. cristatus)

Species recorded by Mr. C. W. Dale, in the History of Glanvilles Wootton.

1. Lacerta vivipara
2. Anguis fragilis
3. Natrix torquata
4. Pelias berus
5. Bufo vulgaris
6. Rana temporaria
7. Triton cristatus
8. ,, punctatus

The plate represents the variety of the Common Snake alluded to at p. 94.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6a

EXPLANATION OF PLATE.

FIG. 1.—*Drassus mysticus*, sp.n.

1*a*. Spider enlarged.

1*b*. Palpus.

1*c*. Eyes from above and slightly behind.

2.—*Tmeticus Carpenteri*, sp.n.

2*a*. Profile of male.

2*b*. Cephalothorax and falces of ditto.

2*c*. Eyes from above and slightly behind.

2*d*. Sternum, maxillæ, and labium.

2*e*. Genital aperture of female.

3.—*Savignia frontata*, Bl. (female).

3*a*. Profile.

3*b*. Eyes from above and slightly behind.

3*c*. Genital aperture.

4.—*Cnephalocotes curtus*, Sim.

4*a*. Profile of male.

4*b*. Eyes from above and slightly behind.

4*c*. Right palpus on outer side (male).

4*d*. Ditto on upper side.

4*f*. Spine in connection with palpal organs (male).

4*e*. Genital aperture (female).

5.—*Caledonia Evansii*, Cambr. (female).

5*a*. Eyes from above and slightly behind.

5*b*. Genital aperture.

5*c*. Ditto in profile.

6.—*Pedanostethus neglectus*, Cambr. (female).

6*a*. Genital aperture.

On New and Rare British Spiders found in 1893; with Rectification of Synonyms.

By Rev. O. P. CAMBRIDGE, M.A., F.R.S., &c.

Read at the Field Club Meeting, Dorchester, March 15th, 1894.

[With Plate.]

THERE seems to have been nothing remarkable recorded either in respect to the appearance or non-appearance of spiders in the abnormal season of 1893. The dry summer weather which set in in March and extended to the beginning of July threw the insect tribes of all kinds quite out of their usual reckoning, but the spiders appear to have kept to their normal times, only that their numbers were certainly far less abundant than usual, especially those which ordinarily abound in early autumn. Among those met with by myself and others are nine species new to science and four new to Britain. Among the former three new genera of *Linyphiinæ* are characterised. As regards Dorsetshire one only of the above occurred in the county; one new species hails from Carlisle, five from Scotland, one from near Penrith in Cumberland, one from Southwell Nottingham-

shire, and one from Hoddesdon in Hertfordshire. Three of the species new to Britain occurred in Scotland, and one in Dorsetshire.

All the above are contained in the following list, which also comprises some other rare species found in Dorsetshire and other localities :—

ARANEIDEA.

DRASSIDÆ.

Drassus mysticus, sp. n.

Adult male, length $2\frac{1}{2}$ lines. Closely allied to *D. troglodytes*, C. Koch, but differs among other characters in the eyes of the posterior row being equidistant from each other (taking into consideration the obliquity of the hind-centrals), and the whole group is more closely set together. The interval between the fore-centrals and that between the hind-centrals is almost equal, these four eyes forming a rectangular quadrangle whose opposite sides are respectively nearly equal to each other. The hind-centrals are oblique, irregularly oval but scarcely triangular.

The palpi are very similar to those of *D. troglodytes*, but the radial apophysis is not so strong nor nearly so greatly dilated at the extremity. The palpal organs are very similar.

The *legs* were not in sufficiently good condition to enable me to make any comparison with those of *D. troglodytes*, and the spider is a much smaller one than those of that species. It is evidently nearly allied to *D. concertor* Sim., but M. Simon says it is new to him. It is also nearly allied to *D. infuscatus* Westr., but the position of the eyes is different, and the spider itself is much smaller.

Several examples of this spider were received from Mr. Morris Young, from Paisley, in February, 1894, captured under bark of fallen fir trees near Paisley, but all were in bad condition, having been evidently first dried and then gummed on card in spirit of wine—a process almost fatal to satisfactory identification—and although the colour was evidently gone it is probably very similar to that of *D. troglodytes*. In the present instance, however, in spite of its unsatisfactory condition, it seems almost

certain that this spider is new to science and quite certainly new to Great Britain.

AGROECA CELANS.

Liocranum celans, Bl. Cambr., Spid. Dors. p. 41.

Adult females of this rare spider were found near Carlisle by the Rev. F. P. Cambridge.

DICTYNIDÆ.

DICTYNA PUSILLA.

Dictyna pusilla, Westr. Cambr., Spid. Dors. p. 426.

An adult male, at Bloxworth, in June, 1893.

This is only the second record of this species in Dorsetshire.

DICTYNA LATENS.

Dictyna latens, Bl. Spid. Dors., p. 50.

„ *lugubris*, Cambr. Spid. Dors., p. 466.

non. *D. lugubris*, Cambr. Journ. Linn. Soc. xi., p. 535.

After careful comparison under a microscope of the spider described Spid. Dors. p. 466, with the types of *D. lugubris* (found in Corfu), and a series of *D. latens* Bl., I have reluctantly come to the conclusion that it is only a rather strongly developed example of the latter.

LETHIA SUBNIGER.

Lethia subniger, Cambr. Spid. Dors., p. 467.

„ *Mengii*, Cambr. l.c., p. 52.

„ *albispiraculis*, Cambr. l.c., p. 53.

„ *puta*, Cambr. l.c., p. 53.

Examination and comparison under a microscope prove that the above are all of one species.

The shining white scales beneath the fore extremity of the abdomen of *L. albispiraculis* do not cover (as was supposed l.c.) the spiracular plates, but indicate the position of the spermathecæ in connection with the generative organs. These scales, so striking in the female spider when first captured, become after a time, when

in spirit of wine, dull and lustreless. In the male they are scarcely visible at any time. The whole spider after some time becomes, in spirit of wine, of a dull yellow-brown hue ; from these facts, and from a considerable variation in size, it happened that individuals of this species were formerly at various times described as distinct species.

THERIDIIDÆ.

Pedanostethus neglectus.

Neriene neglecta, Cambr. Spid. Dors., p. 121.

The male only of this spider was described l.c. supra. An adult female—the only example I have yet seen—was found by C. O. P. Cambridge among moss at Bloxworth in June, 1893. It resembles the male in its general characters and colour, but is a little larger, and the form of the genital aperture is very characteristic.

Micronetta decora.

Neriene decora, Cambr. Spid. Dors., p. 492.

Micronetta clypeata, F. P. Cambr. Ann. and Mag., N.H., Ser. 6, Vol. xiii., 1894, p. 90.

Careful comparison of the types of the above two species prove them to be identical. The examples from which *M. clypeata* was described were found in Newtown Moss, Penrith, Cumberland, in April, 1893, by the Rev. F. P. Cambridge.

Micronetta saxatilis.

Neriene saxatilis, Bl. Cambr., Spid. Dors., p. 124.

,, *Campbellii*, Cambr. l.c., p. 590.

,, *rustica*, Cambr. l.c., p. 592.

The careful examination of structural characters, difficult to be accurately seen excepting under a microscope, proves the above three spiders to be identical in their species.

Gongylidium morum.

Gongylidium morum, Cambr. Annals of Scottish Nat. Histy., 1894, p. 21, pl. 1, fig 2.

A single example of the adult female, received from Mr. W. Evans, by whom it was found, at Aberlady, Scotland.

Bathyphantes setiger.

Bathyphantes setiger, F. P. Cambr. Ann. and Mag., Nat. Hist., sec. 6, vol. xiii., 1894, p. 91, pl. 1, fig 6.

Allied to *B. nigrina*, Bl., and also to *B. parvula*, Westr., but is smaller. Both sizes in the adult state were found in Newtown Moss, Penrith, in April, 1893, by the Rev. F. P. Cambridge.

Leptyphantes Whymperi.

Leptyphantes Whymperi, F. P. Cambr. l.c., p. 93, pl. 1, fig 1.

Appears to be a fine and very distinct species found on Ben Nevis in autumn by Mr. Edward Whymper.

bolyphantes expuncta.

Linyphia expuncta, Cambr. Spid. Dors., p. 512.

Examples of this spider were sent to me for examination by Mr. G. H. Carpenter. They were found in Scotland by Mr. W. Evans, of Edinburgh.

Hillhousia misera.

Linyphia turbatrix, Camb. Spid. Dors., p. 454

,, *misera*, Camb. Ann. and Mag. N.H., 1882 ser.

Hillhousia turbatrix, F. P. Cambridge. Ann. and Mag. N.H., Ser. 6, Vol. xiii., 1894, p. 89, pl., 1, fig. 3.

The genus *Hillhousia* was characterised (l.c. supra) by the Rev. F. P. Cambridge on the present and following species. It is distinguished mainly by the deeply indented posterior margin of the cephalothorax; in other respects it is nearly allied to *Tmeticus* Menge and *Porrhomma*, Sim.

Hillhousia desolans.

Hillhousia desolans, F. P. Cambr. l.c., p. 89, pl. 1, fig 4.

Found at Southwell, Notts, running on iron railings, in July, 1892, by the Rev. F. P. Cambridge.

Tmeticus neglectus.

Tmeticus neglectus, Cambr. Annals Scottish Nat. Histy., 1894, p. 22, pl. 1, fig 3.

A single example of the adult female was sent to me many years ago from the Island of Colonsay by the late Colonel Pickard, R.A., and another was found near Penzance in August, 1893, by Arthur W. P. Cambridge.

Tmeticus Carpenteri sp. n.

Adult male, length 1½ lines. Adult female, 2⅓ lines.

Cephalothorax of male oval, much broader than long, obtuse and rounded in front ; lateral marginal constrictions at caput very slight. Caput moderately convex, a very slight dip in the profile line just in front of the thoracic junction. Clypeus impressed just below the eyes, sloping forwards and equal in height to half that of the facial space. Colour yellow-brown, the normal indentations indicated by dusky brown converging lines.

Eyes on black spots, moderately closely grouped together in two transverse lines, the posterior line straight, the anterior shortest and curved. The eyes of the posterior row are equi-distant from each other, the intervals being an eye's diameter in extent, the four central eyes form a trapezoid, whose length is equal to its greatest width (behind) ; the fore-central eyes are smallest, near together, but not contiguous to each other. Those of each lateral pair are contiguous to each other and seated rather obliquely on a slight tubercle.

Legs 1, 4, 2, and 3 moderately long, rather slender, furnished with hairs ; on the genual joints one, and on the tibial joints two slender bristle-like spines ; of the latter one is in front towards the hinder end, the other at the fore-end, rather on the inner side. Colour similar to that of the cephalothorax.

Palpi rather short ; the cubital and radial joints very short, but of equal length ; the latter is strongest and a little produced in front, dilated at the fore extremity, with a small subangular prominence on the outer side, where there are some strongish bristly hairs ;

digital joint of moderate size, about equal in length to the radial and cubital joints together. Palpal organs complex, with various spines and corneous processes, among which is a conspicuous long semi-diaphanous, strongly curved one on the outer side. These organs, however, can only be adequately explained by figures.

Falces moderately long, divergent, tumid at their base, convexly prominent in front, conical at their extremity, colour like that of the cephalothorax.

Maxillæ and *Labium* normal; the latter deeply and transversely impressed, similar in colour to the falces.

Sternum heart-shaped, strongly convex, deep black-brown, shining, and covered with a few strong bristly hairs.

Abdomen oval, very convex above, and of a deep brown colour, covered thinly with short hairs.

The female (if it be indeed that of the male described) agrees with it in colours, general character and appearance, but is much larger, and the legs are more profusely furnished with hairs; especially notable among others are some longitudinal rows of strongish bristly ones along the anterior sides of the femora, and beneath the tibiæ of the first and second pair, and in fact the whole armature of the legs and palpi vividly recalls that of the genus *Enoplognatha*, the palpi, however, have no terminal claw as in that genus.

The tibiæ of the first pair (and of the second pair in a less degree) are rather incrassated. The proportion of the legs is distinctly 4, 1, 2, 3. The genital process is moderately prominent and its form specifically characteristic. The male above described was found at Swanston, near Edinburgh, and the female on the Pentland Hills, by Mr. Wm. Evans; they were kindly sent to me by Mr. G. H. Carpenter, with whose name I have great pleasure in connecting it. The species is nearly allied to *Tmeticus rufus*, Wider, but the structure of the palpi and palpal organs is quite distinct.

TMETICUS RUDIS.

Neriene rudis, Cambr. Spid. Dors., p. 484.

Tmeticus niger, F. P. Cambr. Ann. and Mag., N.H. 1891, vol. vii., p. 80, pl. ii., f. iv.

Porrhomma nigrum, Cambr. Proc. Dors. N.H. and A.F. Club, 1891, vol. xii., p. 92.

Subsequent examination proves the identity of *Neriene rudis*, Cambr., with *Tmeticus niger*, F. P. Camb.

PORRHOMMA MICROPHTHALMA.

Linyphia microphthalma, Cambr. Spid. Dors., p. 523.

,, *incerta*, Cambr., l c., p. 205.

,, *decens*, Cambr., l.c., p. 217.

Porrhomma Meadii, F. P. Cambr. Ann. and Mag., N.H., 1894, ser. 6, vol. xiii., p. 101, pl. II., fig. 2.

Careful microscopic examination and comparison appear to show that the above are identical species. It has been found at Bloxworth, as well as at Hoddesdon (in Hertfordshire), and near Durham. An ordinary lens is not sufficient for the certain determination of these, and many other minute and closely allied spiders.

PORRHOMMA OBLONGUM.

Linyphia oblonga, Cambr. Spid. Dors., p. 204.

Porrhomma oblongum, Cambr. F. P. Cambr., Ann. and Mag., N.H., sec. 6, vol. xiii., p. 102, pl. II., f. 4.

The types of this small spider (adult females only) were found running on iron railings at Bloxworth many years ago. Numerous females and one adult male were subsequently found at Hoddesdon by Mr. F. M. Campbell on railings and among grass, and in June, 1893, I met with both sexes in the adult state not unfrequently among herbage in a wood at Bloxworth.

PORRHOMMA CAMPBELLII.

Porrhomma Campbellii, F. P. Cambr. Ann. and Mag., N.H., sec. 6, vol. xiii., 1894, p. 108, pl. II., fig 5.

Found at Hoddesdon by Mr. F. M. Campbell in 1883, but only lately distinguished from *P. oblongum* and others—a single female only.

Porrhomma myops.

Porrhomma myops, Sim., F. P. Cambr. l.c., p. 107, pl. II., fig 6.

A single specimen was found by myself at Bloxworth many years ago, but, by an oversight, not before recorded as British. It may easily be distinguished by the excessive minuteness of the eyes, which to the naked eye appear only like minute points.

Coryphæus glabriceps.

Coryphæus glabriceps, F. P. Cambr. l.c., p. 87, pl. 1, fig 2.

The genus *Coryphæus* has been lately established (l.c. supra) for a spider nearly allied to *Tmeticus* (Menge) and *Porrhomma* (Sim.) and found by the Rev. F. P. Cambridge, near Carlisle, in 1892.

Caledonia Evansii.

Caledonia Evansii, Cambr. Annals of Scottish Nat. Histy., 1894, p.p. 20-21, pl. 1, fig 4.

The genus *Caledonia* has been recently established for the reception of a very distinct spider (of which a fragment of the male only came to my hands). It was found by Mr. Wm. Evans, of Edinburgh, on the Pentland Hills. An adult female has since been received from the same locality ; it resembles the male in general characters and appearance, but the genital aperture is of an exceedingly remarkable and characteristically distinct form.

Tapinocyba subitanea.

Walckenaera subitanea, Cambr. Spid. Dors., p. 144.

An adult male found near Carlisle by the Rev. F. P. Cambridge in 1892. This is only the second locality known for it as yet in England.

Troxochrus hiemalis.

Walckenaera hiemalis, Bl., Cambr. Spid. Dors., p. 160.

An adult male was found in Morden Bog near Bloxworth in September, 1893.

Typhocrestus digitatus.

Erigone digitata, Cambr. Proc. Zool. Soc. Lond. 1872, p. 758, plate lxvi., fig. 14.

Typhocrestus digitatus, Cambr., Sim. Arach. de France, vol. v., p. 584.

„ „ Cambr. Annals of Scottish Nat. Histy., 1894, p. 19, 1894.

Adults of both sexes were received from Mr. G. H. Carpenter (of the Museum of Science and Art, Dublin); they were found by Mr. Wm. Evans, of Edinburgh, at Aberlady, Scotland, in October, 1893. This species had not before been met with in Great Britain.

Cnephalocotes curtus.

Cnephalocotes curtus, Sim. Arach. de France, vol. v., p. 704.

Adults of this very distinct species were found in Scotland by Mr. W. Evans, and forwarded to me by Mr. G. H. Carpenter in the Autumn of 1893. This is its first record as a British species.

Cnephalocotes elegans.

Cnephalocotes elegans, Cambr. P. Z. S., 1872, p. 766, pl. 66, fig. 23.

„ „ Cambr., Sim. Arachn. de France, vol. v., p. 703.

A single adult male of this spider, new to Britain, was found in June, 1893, at Aviemore, in Scotland, by Mr. W. Evans, and sent to me for examination by Mr. G. H. Carpenter.

Savignia frontata.

Savignia frontata, Bl. Lond. and Edinb. Philosoph. Mag., 3rd ser., vol. iii., p. 105, 1833.

Walckenaera frontata, Bl. Spiders of Great Britain and Ireland, p. 317, pl. xxii., fig. 232, 1864, and Cambr. Spid. Dors., p. 170.

Prosoponcus frontatus, Bl., Sim. Arachn. de France, vol. v., p. 576.

This curious little spider is fairly abundant in Dorsetshire and many other localities. When Mr. Blackwall, who had originally described it as a six-eyed spider, became aware that it really possessed eight eyes, he transferred it to the genus *Walckenaera*. More recently M. Simon, in breaking up that group, included it with some other species in his genus *Prosoponcus*; but it seems to me quite distinct from those with which M. Simon has linked it and to require a genus to itself, no other spider appearing to come near it. Under these circumstances the original genus formed for it by Mr. Blackwall naturally revives, even though one of his characters for it be expunged. I do not believe that the female, of which a figure is given here, has been either described or figured hitherto. This sex is similar to the male in colours and general characters, but is destitute of the elevated caput.

WALCKENAERA CAPITO.

Erigone capito, Westr. Aran. Suec., p. 213.

Walckenaera capito, Westr., Cambr. Proc. Dors. N.H. and Antiq. Field Club, vol. x., p. 119, pl. A, fig. 7.

,, ,, Sim. Arachn. de France, vol. v., p. 823.

An adult male, the second example only as yet recorded in Great Britain, was sent to me from Paisley, Scotland, by Mr. Morris Young, by whom it was found in September, 1893, among overhanging grass and herbage on a bank near that town. The other recorded example was found under a stone near Ringstead, Dorset, by the Rev. F. P. Cambridge, in October, 1888.

EPEIRIDÆ.

EPEIRA ALSINE.

Epeira alsine, Walck. Cambr., Spiders Dors., p. 530.

Adult females of this very handsome species were found by Mr. Linnæus Greening, of Warrington, at Chatteris, Cambridgeshire, in the autumn of 1892. The only previously known British localities were Tring, in Buckinghamshire, and Bloxworth, Dorsetshire. It is thus widely dispersed though rare.

THOMISIDÆ.

Oxyptila sanctuaria.

Oxyptila sanctuaria, Cambr. Spid. Dors., p. 319.

Thomisus sanctuarius, Cambr. Trans. Linn. Soc., xxvii., p. 405, pl. 54, No. 8.

Several adult males were found on the Rectory Walls at Bloxworth in August and September, 1893, and one near Penzance by A. W. P. Cambridge in August. The female appears to have as yet escaped detection.

Micrommata virescens.

Sparassus smaragdulus, Walck., Bl. Spid., Great Brit. and Ireland, p. 112, pl. v., fig 61.

Araneus virescens, Clerck. Sim., Spid., p. 138, pl. vi., Tab. 3.

Micrommata virescens, Clck., Cambr. Spid. Dors., p. 341.

On the 5th of May, 1893, I found at Bloxworth the first adult male of this large and strikingly handsome spider I had ever met with in Dorset. In the immature state, and occasionally adult in the female sex, I have known it in our woods for many years. The bright green colour and vivid scarlet stripes of the male make it a beautiful and very showy object running over the woodland herbage. Why the male should be so scarce in the adult state it is not easy to conjecture.

LYCOSIDÆ.

Trochosa biunguiculata.

Trochosa biunguiculata, Cambr. Spid. Dors., p. 544, and Annals Scottish Nat. Histy., 1894, p. 23, pl. 1, fig 1.

The adult female (new to Science) was sent to me by Mr. G. H. Carpenter from Scotland, where it was found at Aviemore by Mr. W. Evans in 1893. It is very like the male, but more distinctly marked and more richly coloured.

Lycosa Traillii.

Lycosa Traillii, Cambr. Spid. Dors., p. 545.

This fine and very distinct species was found in some abundance between Borrowdale and Wastdale Head, Cumberland, by the Rev. F. P. Cambridge in June, 1893. It appears to be specially attached to spots thickly crowded with loose stones and boulders, among which, owing to their swift movements, it is exceedingly difficult to capture them.

SALTICIDÆ.

Attus pubescens.

Euophrys pubescens, C. L. Koch. Cambr., Spid. Dors., p. 408.

Adult males were found on the walls of the Vicarage, Bere Regis, in July, 1893. It is a rare and local spider.

Hasarius adansonii.

Hasarius Adansonii, Aud. Cambr. Spid. Dorset, p. 566.

Salticus citus, Cambr. Zoologist, 1869, p. 8,461, Ann. and Mag., N.H., 1878, ser. 5, Vol. 1, p. 127.

Hasarius Adansonii, Cambr. Proc. Dors. N.H. and A.F. Club xiv., p. 162.

Adult examples of both sexes of this spider were received from Paisley from Mr. Morris Young, by whom they were found in exotic planthouses at Paisley in 1893. This adds another to the widely dispersed but similar localities, in which this, no doubt, imported species has occurred in Great Britain.

List of Spiders above recorded or described.

Drassus mysticus, sp. n.	p. 104.
Agroeca celans, Bl.	p. 105.
Dictyna pusilla, Westr.	p. 105.
,, latens, Bl.	p. 105.
Lethia subniger, Cambr.	p. 105.
Pedanostethus neglectus, Cambr.	p. 106.
Micronета decora, Cambr.	p. 106.

Microneta saxatilis, Bl. p. 106.
Gongylidium morum, Cambr. p. 106.
Bathyphantes setiger, F. P. Cambr. p. 107.
Leptyphantes Whymperi, F. P. Cambr. p. 107.
Bolyphantes expuncta, Cambr. p. 107.
Hillhousia misera, Cambr. p. 107.
,, desolans, F. P. Cambr. p. 107.
Tmeticus neglectus, Cambr. p. 108.
,, Carpenteri, sp. n. p. 108.
,, rudis, Cambr. p. 109.
Porrhomma microphthalma, Cambr. p. 110.
,, oblongum, Cambr. p. 110.
,, Campbellii, F. P. Cambr. p. 110.
,, myops, Sim. p. 111.
Coryphæus glabriceps, F. P. Cambr. p. 111.
Caledonia Evansii, Cambr. p. 111.
Tapinocyba subitanea, Camb. p. 111.
Troxochrus hiemalis, Bl. p. 111.
Typhocrestus digitatus, Cambr. p. 112.
Cnephalocotes curtus, Sim. p. 112.
,, elegans, Cambr. p. 112.
Savignia frontata, Bl. p. 112.
Walckenaera capito, Westr. p. 113.
Epeira alsine, Walck. p. 113.
Oxyptila sanctuaria, Cambr. p. 114.
Micrommata virescens, Clerck. p. 114.
Trochosa biunguiculata, Cambr. p. 114.
Lycosa Traillii, Cambr. p. 115.
Attus pubescens, C. L. Koch p. 115.
Hasarius Adansonii, Aud. p. 115.

Dorset and King John.

Notes on the Pipe Rolls (Dorset) of that Reign, Supplemented and Illustrated by References to the Patent and Close Rolls of the same Period.

By Rev. W. MILES BARNES.

VERY few original records exist of a date so early as John's reign. The Patent rolls, the Close Rolls, the Charter and Curia Regis Rolls, with the Pipe Rolls, nearly exhaust the list. The most important and by far the least known of these ancient records are undoubtedly the series known as the "Pipe Rolls" or "Great Roll of the Exchequer." These documents were described and illustrations of the earliest of them extant were given in the volume of the transactions of the Dorset Antiquarian Field Club issued last year.

Since preparing that paper I have read the Pipe Rolls relating to that most interesting and obscure period of our county history, the reign of John; and in this paper I purpose giving extracts

from the Pipe Rolls, supplemented and illustrated by extracts from the Close and Patent Rolls, of the same period.

The Close and Patent Rolls of John's reign have been printed in facsimile type by the Record Commissioners, and though out of print they are accessible, and in their modern garb they present no unusual difficulties to the reader. In the Close Rolls, though the letters relating to this reign number some thousands, there is little difficulty in finding what relates to the county, but there is a distinct difficulty in making a selection from the Patent Rolls. In the first place you cannot, as you generally can with a Close letter, see from the first words of a Patent letter whether it contains information relating to the county and likely to be useful; so all letters patent have to be looked through, and to look through some thousands of such letters in abbreviated Latin takes time, and as the reader ought whilst reading them to bear in mind the names mentioned in the Pipe Rolls so as to recognise them again in the Patent Rolls, it will be seen that serious omissions are very likely to occur.

The extracts I have made from the original Pipe Rolls with a translation will be found in the Museum. They are too voluminous to be reproduced in their entirety here; the notes upon them which follow here are necessarily disjointed and fragmentary, and should be regarded as a contribution of material towards a future history of the county in King John's reign.

The movements of that most restless of kings, King John, have been traced and an Itinerary compiled by Sir T. D. Hardy. The Itinerary may be accepted as absolutely reliable. "The authority for assuming the King was present in person at the several places specified in the Itinerary is derived—first, from his attestations to the Charters and letters which are registered on the Patent, Charter, and Close Rolls; secondly, from the movements of the Court exhibited in the *Rotuli misarum*, or Wardrobe accounts, and in the Præstita Rolls; and thirdly, from the internal evidence afforded by the records," says Sir T. Hardy of his compilation. As it will be useful to us I will give extracts from the Itinerary, show-

ing in alphabetical order what places in Dorset were visited by the King and the dates of his arrival and departure :—

Bere Regis.	1204, June 27-29.
	1205, Jan. 7-8, June 25-27, Aug. 18-21.
	1206, Jan. 5-7, Dec. 13-14.
	1207, March 28, Sep. 4-5.
	1209, July 1, Sep. 18.
	1210, Jan. 13, Oct. 3.
	1213, June 26-27, July 4-5.
	1215, Feb. 4.
	1216, June 19-20.
Bindon.	1213, July 26-28.
Blackmore.	1208, Sep. 25.
	1209, Sep. 22, also Holwell, 1207, Sep. 6.
Blandford.	1216, June 17.
Bridport.	1201, April 20.
Canford.	1200, Dec. 12-13.
	1204, Nov. 14-16.
	1210, Jan. 11.
	1211, Feb. 7-9, 11.
	1212, Oct. 12-13, Dec. 14.
	1213, March 18-19, June 25-26.
	1214, Jan. 20, Oct. 20.
	1215, Feb. 1.
Charborough.	1204, July 24.
Corfe.	1205, Aug. 22-23.
	1209, July 1-2.
	1210, Oct. 1.
	1212, Oct. 14, Dec. 16.
	1213, March 17, June 21-24, 29, July 14-15, 23-25, Aug. 3, 5, 9.
	1214, Jan. 21, Oct. 17-20, Dec. 4.
	1215, Feb. 1-3, April 27-28, July 12-13.
	1216, June 23-30, July 1-6, 8-17, Aug. 25-26.
Cranborne.	1200, Dec. 10.
	1201, Ap. 15.
	1205, Jan. 9, Aug. 16-17.
	1206, Ap. 15-17, May 16.
	1207, Jan. 20, March 26-28, Ap. 6-8, Sept. 1-3.
	1208, Nov. 6, 19.

Cranborne.	1209, June 29, Sep. 17, Dec. 16.
	1210, Jan. 22.
	1213, March 16, July 6-8, 16, Aug. 10.
Dorchester.	1204, July 3-4.
	1205, Jan. 4, 5, June 16, 22-25, Aug. 24-26.
	1206, Jan. 8-9.
	1207, Jan. 20-22, Feb. 3.
	1209, Sept. 20.
	1210, Jan. 14-16, Sep. 30.
	1211, Feb. 17.
	1213, July 15, 26-29.
	1214, Oct. 17.
Froome.	1206, Jan. 17.
Gillingham.	1204, June 23-26, Nov. 18, 30, Dec. 3-6.
	1205, Nov. 10-14.
	1206, Jan. 12-16.
	1207, Jan. 25, Feb. 6, Ap. 4-5, July 24.
	1208, March 1-2, Sep. 28-30, Nov. 14.
	1209, July 3-4, Sep. 23, Dec. 15.
	1210, Oct. 3, 7.
	1211, Feb. 12, 15.
	1212, Oct. 16.
	1213, March 15, July 8-10, Aug. 1.
	1214, Dec. 6-8.
Holwell.	See Blackmore.
Karebroc.	See Charborough.
Milton.	1209, July 2.
Newton.	1204, June 27.
	1207, Sep. 9-11.
	1208, Sep. 25.
	1213, July 31.
Poorstock.	1205, Aug. 25.
	1207, March 29, 30, Sep. 8.
	1210, Sep. 27.
	1213, July 29-31.
Sherborne.	1207, Ap. 3.
	1216, July 18, Aug. 23-27.
Stalbridge.	1207, Sept. 7.
Studland.	1213, July 23-25, Aug. 9.
Sturminster.	1207, Feb. 3, 5.
	1210, Jan. 18, 20.

Sturminster.	1214, Dec. 3-4.
	1216, June 15-16.
Wareham.	1209, July 1.
	1212, Dec. 16.
	1215, Aug. 9-13, 20-22.
	1216, June 18-22, July 7-9.

King John was crowned at Westminster on Ascension Day, May 27th, A.D. 1199. For a month, or nearly so, he remained in England, visiting Northampton, Canterbury, and Shoreham. He then crossed to Normandy and returned circa Feb. 26, 1200, landing at Portsmouth and visiting various places in England to May 1st, when he re-crossed to France and remained there till about Oct. 4, when he returned again to England, remaining here to the middle of May, 1201. It was during his stay in England at this time that he paid his first visit to Dorsetshire. He got as far as Cranborne on Dec. 10-11, A.D. 1200. From Cranborne he went on to Canford on the 12th, Christchurch on the 13th. He was back in Cranborne on April 15, 1201, and from thence he paid his first visit to Dorchester on the 18th, and on the 20th he went on to Bridport, thence to Exeter.

Cranborne, Corfe, Dorchester, Bere, Canford, and Gillingham were his favourite residences in Dorset.

1 JOHN, A.D. 1199-1200.

Peter de Schidimor was Sheriff of Dorset and Somerset in the first year of John's reign, and the firm of the counties was Dorset, £120 ; Somerset, £360 ; equivalent, perhaps, to £2,000 and £6,000 respectively. Of the £480 due from the two counties the sheriff had paid £139 2s. 1d. blank, and he accounts for the residue. The late King Richard had made certain grants from the lands belonging to the Royal demesnes in the counties to certain persons by way of alms, as to the Carthusian friars, of Witham, to whom he assigned 100s. in Witham, and the same in lands in Bridport ; to others he assigned rent charges on lands, or grants of the lands themselves, as rewards for services rendered to the Crown, or in acknowledgment of them, and to relatives or friends of the King.

A, the queen mother, received £28 a year from lands in Ilchester ; Robert Berkeley, £30 a year ; Bailebien, £1 10s., in Langham, near Gillingham ; Alan, the steward, £4 4s. 6d. in Dalewade and Whitewell portions of the Manor of Fordington, if "m'bris de Fordinton" is to be so rendered ; and to Turstan, son of Godfrey, 5s., in the town of Dorchester ; and to Alde de Alphia, 40s., in the hundred of Norton ; and to Robert, son of Maurice, 5s., in Alkesie.

The form in which these payments are entered is a little perplexing, and I have vainly searched for some explanation of them. In some cases the grant appears to have been a grant of the land itself, and the li' and s' indicate the number of librates and solidates of land so conveyed, each librate representing land of one pound in annual value.* In other cases the payments seem to have been of fixed value, attached to certain lands, so that the lands themselves were not alienated, but remained in the Royal demesne, and the dues upon them were collected, as they ever had been, by the sheriff, who paid the grants or pensions out of the receipts, so that they were in fact rent charges on the land, not unlike the "rentes" which it has been customary, possibly from Norman times, to charge in Guernsey on lands and houses ; the grant to Geoffrey de Wandestrie of 70s. *by tale* in Nordcuri must have been of this nature, for how could a payment of 70s. *by tale* apply to a grant *in land?* Yet this entry is amongst the terræ datæ. Some letters patent of John's reign, throw light upon the subject, though as different deductions may be drawn from them I will quote them without comment. By letters patent (4 John, Mem. 14) the King commands the barons of the Exchequers of Caen to pay to Almar de Tibboville £50, £25 at each of the two sessions of the Exchequer "until we have assigned them to him in land," "quousq' illas ei i' t'ra assignav'im'."

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* Rex vic' Doreset' sal't. P'cip' t' q'd plena' saisin' facias h're facias Rob' de novo Burgo de viii li' 't c sol' t're in Fordinget', &c. (Rott. Litt Claus, John 7, 7 Sep.)

Rents granted by the King from ecclesiastical benefices in his own gift were of a similar nature. Thus there was granted to H. de Cornhull clerk 100s. rent in the Church of Soles "Centu' solidat' reddit' i' eccles' de Soles,'" which benefice was vacant and in the King's gift (6 John, Memb. 4), and to Henry the Abbot, partly on account of his poverty, the King granted 12 marks in an ecclesiastical benefice (16 John, Memb. 14). And to John de Feireford "100s. of rent in an ecclesiastical benefice" (16 John, Memb. 14). There are five instances also on Memb. 13 of the same year.

Sometimes the payment was made under the name of pension. As to Eudo Martell, who had resigned the benefice of Stradbrook, but received letters patent for one besant to be paid out of the perpetual vicarage of the same Church under the name of pension, "i bisant' nomi'e pensionis" (9 John, Memb. 1), and to the Archdeacon of Suffolk who received "de pensio'e j aurei in eccl' ia de Semer'" (16 John, Memb. 10).

The payments or grants are to men of all degrees and conditions of life, and for various services or for none. After the grant to the Carthusians at Witham comes a pension to "A, the queen mother of the King, £28 a year in Ilchester." The Patent Rolls give very little information about Alienora, the Queen mother. She lived but a short time after this, for by letters patent dated April 15, 1205, the King informs the sheriff of Dorset and other sheriffs that "for the love of God and for the safety of the soul of our very dear mother who is recently dead" he had discharged and quitted claim on all prisoners except those taken in the late war, and the Jews who were his prisoners, and charges the sheriff to liberate all prisoners in Dorset except such as came under either of these classes (Rot. Pat., 6 John, Memb. 11 in dorso).

Robert Berkely, the recipient of £30 a year, was in the King's confidence. He was one of three persons sent on a confidential errand to the barons, knights, and freeholders of Dorset in Feb., 1215 (16 John, Memb. 7).

Towards the close of this portion of the Pipe Roll is a list of defaults at Congresbury, and of payments made in respect of

them ; for stock on manors which were in the King's hands had to be kept up, if it was deficient the deficiency or the loss occasioned by it had to be made good ; and the stock at Congresbury *was* deficient. There was a plough missing, for which 10s. had to be paid, and 150 sheep, for which 15s. was paid for the half-year, 16 cows 8s., and 16 sows also 8s. The re-stocking did not take place till the next year.

The next charge is of 40s. for robes supplied to William Alphay and Robert de Winterburn, who were in the King's service, but in what capacity there is no mention. Many persons in the King's service were supplied with clothing as well as food. So far I have found in these Rolls instances of huntsmen, falconers, crossbowmen, envoys, and officials in the diplomatic service so supplied, * and the entries for cloth are frequent. The cost of the robes shows that William Alphay and Robert de Winterburn were not employed in any mean capacity.

Next we have the charge of 15s. for bringing up to Shoreham from Corfe Castle five hostages of Joel del Maine with their two warders.

Then follow the returns of the Manors of Toller and Winfrith. In those days the forest ran up very near to Dorchester, and the inhabitants of Winterborne and "the other Winterborne" (al' Wint'burn') pay a fine of 20s. for liberty to break up some of it, so as to bring it under cultivation.

A certain Robert de Melcomb made fine in the sum of five marks, "ut p'set euirare forest'," which seems to mean that he might be clear of a breach of the forest laws which he had committed ; but instead of appearing to pay the fine he went poaching the King's deer, was detected, and took sanctuary in

* Rex Hug de Nevill mandam' vob' q'd faciatis h're Mg'ro P. Balistar, n'ro 't ux' ej' duas robas de vi'idi v'l de burneto (Rott. Litt claus, 3 Jan., John 7, Memb. 6). . . . . 't Wallensi uni garc'oi illor' una' roba' h're facias (Rott. Litt claus, John 7, Memb. 1, 18 March). Mandat' ; eid' q'd faciat h're Walt'o de Bundervill' j roba' de v'idi cu' cunic'lis 't x. m' argent' q' d'n's Rex mittit eu' i' negociu' suu' q'd desid'at i'stancia', &c. (Rot. Litt claus, John 7, Sep. 19).

church. The sheriff, however, decided that William de Wroteham, who was the worst offender because he had received the deer, was the man who ought to have been summoned, and no doubt the sheriff obtained the fine from him if he could not obtain it from the man in sanctuary, but at the time the Roll was written neither had paid. The entry runs as follows:—"Rob' de Melecu'b ( ) v.m' ut p'set euirare forest' q'n fug'at i'eccl'ia p' venat' de q'bus Will' de Wroteha' deb' resp' qui' recognouit se eas recepisse." The clerk who made the entry left a space in which to write deb' or redd'—"owes" or "returns" after Robert de Melcomb's name—but he did not fill it in. This would, I imagine, leave it open to the sheriff to come down on either of the gentlemen in payment of the fine.

The forests were very extensive, and it was not possible to guard them perfectly, and it must have been a great temptation to individuals, especially to villagers living on the borders of a forest, to take a deer occasionally. That such offences were of common occurrence we gather from the frequency with which entries of the breach of the forest laws occur in the Rolls. For the offence of taking venison, "p' capt' venat'," Adam, brother of Osbert, and the village of Winford Eagle, were fined half a mark, whilst the village of Kingston was fined two marks for waste—*i.e.*, for destruction made on the manor.

Salt was a valuable commodity in these early times. On looking over letters of licence to merchants in this reign, to see in what the trade of the country chiefly consisted, I found that ship-loads of salt were frequently brought to and carried from England. The salt was produced in evaporating pans dug in the seashore. The sea flowed into them at high tide, the water was allowed to evaporate, and the process was repeated until there was a sufficient depth of salt to be dug out. Salt pits were valuable property, and any encroachment upon the King's was severely punished. We are, therefore, not surprised to find that William de Bretton had to pay 38s. 6d.—a large sum in those days—for encroachment on salt pits, "p' p'p'stur'a saline."

Women were less free in the 13th century than they are in the 19th. They were generally in someone's gift, someone who had the power of disposing in marriage of them, and of their dowers if not of their hearts. Still they could sometimes purchase their freedom and marry the man of their choice. Sibil de Tingerie paid a fine of 100 marks for succession to her lands and for licence to marry whom she would, provided he was in the fealty of the King.

William de Montacute pays £100 for having seizing of his lands of Chaldesta (would that be Chaldon?) and of the hundred of Puddletown, and Robert de Belet 60 marks for having ten librates of land in Swyre, whence he was disseized when Richard was King. Walter de Turberville paid for succession to lands in Toller. Emma de Bruges, Stephen Tirel, and Alfred de Punfold make fine for various purposes.

From the tallage assessed by Master Michael Belet, Robert Belet, and their associates, we learn that the towns in Dorset were assessed as follows :—Gillingham 12 marks, Shaftesbury (de Burgo S. Edward') 10 marks, Dorchester 12, Bridport 12, Abbess of S. Edward's 20, Winfrith 4.

The names which follow are from the list of the first scutage assessed at two marks for the first coronation of King John. The abbots of Glastonbury, of Sherborne, Abbotsbury, and Cerne, the abbess of S. Edwards, Philip de Columbariis, Nicol de Meriet, William de Milliers, William de Erlega, Fulk de Alno, William de la More, Robert Belet, William son of John de Harpetrie, William de Montacute, William de Curcell, Robert de Newburgh, Richard de Atrio, William de Moiun, William Malet, William Marcel, William de Cahaignes, some of them Somersetshire worthies.

A little further on we have the account of Alexander de Hagebeche and Henry de Craneburn of the issues of the manors of Tarent and Cumbe, which contain some interesting items. 59s. 4d. was the fixed rent of Tarent, 13s. 9d. that of Cumbe ; the perquisites of the Court amounted to £12 4s. 5d. for the former, £3 10s. 4d. the latter. The custodians paid for making 33,700 shingles and

100,000 "scindur'," which I think may stand for shingle pins (100,000 shingle pins would allow about three pins to each shingle), also 1,020 planks, the whole cost £16 3s. 5½d. Then there were three piles of timber, which cost 25s. 4d. All these were prepared by the King's order, and therefore they must have been used in the King's service, but where? The King's houses at Cranborne were repaired in this year at a cost of 78s. 2d., but green wood would scarcely have been employed for the purpose, nor could so large a quantity of wood have been used there. The wood must have been prepared, I think, for the new houses at Gillingham, material for the building was already being collected there; two heaps of timber were cut there at a cost of 16s., but more of this later.

Richard, son of Edwin, and Robert Crassus, the King's huntsmen, and their assistants, with the Royal hounds, were supplied with food and cloth, and Roger Rastel and his assistants, who were hunting in Selwood Forest, with the Royal hounds, were furnished with necessaries whilst they were engaged there at a cost of 58s. 5½d.

2 JOHN, A.D. 1201-1202.

Robert Belet was sheriff of the two counties in this year. We have the same payments as in the first part of the preceding Roll, with two or three additions. Amongst the lands granted is a grant "Monach' de Pinnendon' xx. s' i' mol'ndino de Fordinton' q'd h'nt de dono R'," so that was how the Monks of Bindon became possessed of Fordington Mill; it was given them by King John. William de Alphay gets 20s. for cloth this year also, as he did last year.

£150 was spent on the King's houses which were being built at Gillingham. The viewers were Peter Ham and William, son of Baldwyn; and £20 on the Castle of Dorchester, here Philip Crubbe, Hugh son of Eve, and Richard Loke viewed the work for the King. Crubbe is the name of an old Dorchester family which has died out, but the Lock family are still resident in the town after the lapse of nearly 700 years, and probably the family have lived in the town throughout those years. One of the viewers

in each case was of a noble family, Hugh, son of Eve, and Peter Ham, son of Baldwyn, if the statement made by a writer in the Archæological Journal (vol. 1, p. 242) is correct; he says, "In documents whenever a Norman describes himself as 'filius,' *i.e.*, 'Fitz' so and so, his father is always a noble."

The Castle of Corfe was also repaired at the cost of 118s. 4d. Robert de Wells, Alfred le Franceis, and Asa de Mulesham were the viewers there.

The stock on the Manor of Congresbury was deficient again this year as last, and the same payments were made on account of the deficiency, and the stock was made good this year, but in a very extraordinary manner. In the place of the 16 cows wanting, 15 cows and one "affrus" were supplied, the "affrus" being a draught ox employed in farm work, the 16 sows were replaced and one "ure." What creature this was I do not know; possibly it was a boar. But in the place of 150 sheep 100 "lions" were placed upon the manor, and these "lions" have given me a considerable amount of trouble. A reader who has had a large experience in deciphering ancient records, told me that chetahs were formerly used in England for taking game, and that "lions" may have included with them all wild beasts of the chace. I have found no confirmation of this surmise, but Maigne D'arnis gives "Leo, aper ut videtur, Decimam silvestrium bestiarum sive leonum. A.D. 1035." Possibly the King wished to convert Congresbury into a game preserve, and so in the place of 150 sheep he turned into it 100 wild boars. The passage in the Pipe Rolls is as follows:—"Et i' instaur' p'd'car' defaltar' p' c lyonib' ap' Cang'sb' liii.s' et p' xv. vacc' xlv.s' Et p' xvi. scoph' e' j.ure xvii.s'. Et p' j affr' iii.s'." From which it will be seen that the lions cost about 6d. a-piece, the cows, the ox, and the sows 3s. each, in the money of the time. Congresbury is in Somerset, but the entry affords an excellent example of how the manors in the King's hands in Dorset were charged for default, and how such defaults in stock were made good.

I think it was pointed out in the last paper how first the ecclesiastical barons to avoid personal service with the King in

the field, which some of them no doubt felt was inconsistent with their spiritual calling, compounded for it by the payment of a fine under the title of scutage, and how the practice spread to the secular barons also.

There were barons also, who were willing enough to serve the King in the field at home, but to whom it was inconvenient to be so frequently crossing the seas for the King's wars abroad. Hence arose the practice of paying a fine for licence "ne transfrettet" not to cross the sea for service abroad, and this fine like scutage, was a fixed charge on each knight's fee held. In this Dorset roll Richard son of John pays on one knight's fee 4 marks, "ne transfrettet," and for scutage ; or rather he pays 2 marks and owes 2. William de Newmarket pays 20s. for the same. Thomas de Grenville 10s., and William de Bratton 6s.

William of St. Mary's Church renders account of the firm of Winfrith. Randolf de Glamorgan, Robert de Mandeville, Brian Tollard, and Fulk de Cantelupe make fine for various purposes.

John de Montacute had a curious complaint to make. The Bishop of Worcester had carried away one of the Churches from his fief, the Church of Langberg, which the said bishop had pulled down and re-erected on some one else's land, so that John lost his presentation to it, at which he was naturally aggrieved, and he paid 10 marks that inquisition might be made into the matter. It is to be hoped that John recovered his church ; the form of the entry is consistent with the supposition that he was successful in his application.

3 JOHN, A.D. 1201-2.

Hubert de Burg was sheriff, but Alan de Wicton represented him at the Exchequer. The earlier payments in the roll are much the same as before. For small expenses about the King's houses at Dorchester and for the carriage of the King's wines from Southampton to Dorchester the sheriff paid £7 14s. 0½d. John de Dorchester and William de London were the viewers. William Aucupi, a huntsman with the royal hounds, was paid £21 8s. 2d. for various terms of service.

There was no war department in those times to purchase wholesale and to distribute in the army bow-strings made in Germany. The bowmen had to weave their own strings, for which the sheriff supplied them with yarn. Yarn was purchased this year at a cost of 15s. for the crossbowmen stationed in the King's castles of Dorset and Somerset.

£129 7s. 4d., a sum equivalent to between £2,000 and £3,000, was the cost of the works carried out this year in the rebuilding of the King's houses at Gillingham. The viewers were Wido de Osteilli * William Cusin, Thomas of Shaftesbury, Hugo de Droeis, and Gilbert de Bankeham, and £10 that of the work about Sherborne Castle, of which work Warner de Bradford and Hugh de Melburn were the viewers. At Corfe Castle 100s. was spent in repairs. There was spent in putting up and entertaining at Dorchester 8 carters, 3 packhorses, and 2 horses of Randolf Parmentariis and Pictavinus with their grooms or pages nearly a pound. Richard de Limoges with 6 horses and 2 pages (probably at Dorchester) £8 19s. Thirty-six shillings was the cost of keeping 11 of the King's horses at Dorchester.

Richard, son of John, William de Newmarket, and Thomas Grenville paid "ne transfrettent."

Amongst the curious facts in these rolls is the difficulty which even persons of position found in responding to the request for a little ready money. Many of them apparently had little. At one time it is a bishop or an abbot who cannot pay at once a moderate sum of money ; at another it is an impecunious knight who makes fine with the King in the sum of four marks, but he has not the four marks ; he has two which he pays, and he owes two. Even Peter de Schidimor, who was sheriff two years before, owes six marks, his fine for keeping hounds. The same thing is noticeable in earlier reigns, but not, I think, to anything like the same extent.

* Wido de Osteilli did not undertake this duty willingly. He was amerced in the sum of 10 marks because he was not present at the works about the King's houses unless he was attorneyed "q'n'int'fuit op'atio'i domor' R' de Gillingh' n' attornat' fuit."

Was it that the enormous sum provided for the ransom of King Richard swept the country of the precious metals, or was it that some of them thought it wise to conceal their wealth? Several fines for the ransom of King Richard remained unpaid even in this 3rd year of King John. Amongst the debtors in these parts were Richard Luvel, William de Coldreville, Richard de Estre, Goscelyn, son of Pagani, the Abbot of Glastonbury, Jacob de Glastonbury, Robert Belet, Wandril de Curcel, Andrew Talebot, and others; and £4 18s. only, out of £10 8s. 9d., due from the Abbey of Hide on lands in Dorset and Somerset had been paid.

Surprise is sometimes expressed that Richard who was so little known personally to his subjects in England, for not many months of his reign were spent amongst them, should have been so beloved of the people that they were content to strip themselves of their wealth, and even their churches of plate and the precious metals, to furnish the means of his ransom, but it does not follow that Richard was so beloved. His barons and knights could not help themselves, one of the conditions on which they held their lands was that they should ransom their lord when he was taken prisoner. Had they failed to provide ransom they might have been deprived of their lands. The Knights Templars were acquitted of 50 marks due from them for tallage. They generally got off that way.

Roger Char et Chous made a curious compact with the sheriff for having the balliwick of Gillingham, which Richard de Rodes had held. He promised 30 marks and 2 pipes of wine of Algers. The latter he was to supply for the use of the King, if the King went to Gillingham. If he did not go there, the wine was to be Roger's. Roger made a good bargin, for the King did not visit Gillingham in this year, the house was not quite finished for one thing. This incident affords indirect evidence that the King intended to visit Dorset much earlier than he did.

The marriage and wardship of heirs was often a profitable charge, and Brian de Insula paid 120 marks, and one palfrey for having the wardship and marriage of the sons of William Brito,

of Sidelis (would that be Sydling?). Perhaps Brian had a daughter whom he hoped to marry at some future time to the heir of Sydling. If Brian de Insula was the Earl Insula mentioned a few paragraphs further on, one of his daughters was married about this time to Robert the Chamberlain who paid 60 marks for the King's consent to the marriage.

There was little sentiment about those times, and justice, which was of a rough and ready kind, was certainly not tinged by it. Alice, wife of Robert de Waterleia, had been charged with felony. Of this she was convicted and sentenced to be burnt, which sentence was carried out (un' convicta fuit et combusta). By the law her lands and chattels were forfeited to the King; the King, however, relinquished his right to the Archdeacon of Wells, who, on payment of a fine of 20 marks, succeeded to the property of the unfortunate woman.

The Patent Rolls which commence with this year contain nothing in this year which relate specially to Dorset. There are some letters, however, of general interest, which throw an indirect light on the customs of Dorset. Such were the licences to monks and others to import corn or sell it (Memb. 6, 7, etc.), licences to Henry de Puteac, a crusader, allowing him to mortgage his lands for two years from the day of his departure for Jerusalem (Memb. 7, see also 6). Similar letters patent to others to the same purpose show how the crusaders raised funds for their expeditions; the mortgages are generally for a term of two or three years.

There was also a common fund from which aid was supplied, and the last entry on Membr. 6 regulates the application of the funds.

Lampreys were held in much estimation on the Continent as well as in England, and the Countess Bleis' applied through an agent and obtained permission to purchase them for her use. In 3 John, Memb. 3, is an order from the King to the burgessess of Gloucester and others that lampreys were not to be sold for more than 2s. each up to February and at a less price after. The wording of the letter seems to imply that there was a close time for lampreys "a te'p'c q° lampree p'imo capiunt'r i' anno."

It is a curious fact that the King, who, in the 16th year of his reign, according to a patent letter transcribed by Hardy, took upon himself to exterminate heretics in Gascony, should in the 3rd year of his reign give permission to Peter Buillus to adopt any religion he pleased (Memb. 8), yet so it was.

The tenants of the King were restricted in the use of their woods. Lorette de Fontibus had to obtain letters patent (Memb. 7), to take from his wood of Wellendon 'what was reasonably necessary for building, "et focu' suu' faciend,"' but even then under the superintendence of the King's foresters.

4 JOHN, A.D. 1202-3.

Hubert de Burgh was again sheriff, Alan de Wicton, as before, appearing for him at the Exchequer.

The alms are very much as in the previous year; the Knights Templars receive 2 marks, William, son of William de Lanualein, receives £10 blank on lands at Shaftesbury, the Carthusians of Witham £10 on lands at Witham. This order of monks had been introduced into England about 23 years before, and at Witham they had established themselves first; they afterwards had houses at Charterhouse, Skene, and elsewhere. £28 was assigned to the Queen Mother on lands in Ilchester; the other payments under this head are very much as in former years.

For the pay of falconers and for the keep of 11 falcons and one girfalcon from March 13 to November 16 £8 15s. 8d. was spent, and for the pay of the six falconers who carried the said falcons beyond the sea £6 was the cost incurred. The King was not in England this year, and the falcons were probably conveyed to him in France by way of Weymouth or Wareham if they were at Dorchester, and it is probable that they were, for Richard de la Wade and his man were paid 113s. 4d. for their expenses and for the keep of the King's falcons (mewed at Dorchester) from April 4 to Michaelmas Day.

Walter de Winterborne was master of the Royal hounds in these parts, and his pay for 68 days was £6. 2s. 10d., including half a

mark, a gift from the King. Four hawk bearers were paid £4 and 3 falconers 40s.

The stipend of the King's chaplain at Dorchester was 50s. William Wallensi, yeoman of the King, with his 12 boar hounds ("xii. mastinis suis porcariis," tho' porcarius generally signifies a swine herd), was paid 10s. for his expenses from March 21 to May 21. A member of the Wallensi family, a John Wallensi, got into trouble about this time; he had slain Roger, the Chaplain, and Agnes de Styrchleleg; he fled from justice, and was in consequence outlawed. He obtained the Royal pardon and was allowed to return on giving pledges for his fidelity, when the King's pardon was granted; under such circumstances there was generally a clause put in requiring the recipient to stand trial if the relatives of the persons slain desired it. Thus Henry de Stratton was pardoned the outlawry promulgated against him for the death of Michael, vassal of William, son of Roslin, ita t'n q' pl'g' salvos i'veniat standi recto si quis erga ip'm loqui volu'it 't se defendendi p' corp' suu' ad corp' s'n' alia lege (Litt. Pat., 4 John, Memb. 11). As there is no mention here of such a condition the inference is that the manslaughter was considered justifiable (Litt. Pat., 3 John, Memb. 3, in dorso).

A large sum of money was spent on the King's houses in Dorset this year in preparation for the King's intended visit. £47 13s. 2d. was spent on the houses at Bere, where John de Turberville was one of the viewers, 100s. at Sherborne, 100s. on the Castle of Dorchester, about the houses of the King at Corfe the large sum of £275 0s. 1d. (equivalent perhaps to £4,000 of our money), and for the repair of the Castle there 20s. (query, were the King's houses at Corfe within the Castle or without it. Why was this distinction made?) On the Tower of Sherborne 10 marks was laid out.

An approver was allowed 16s. as pay for 192 days Of approvers I have spoken in a former paper.

To H., the King's Clamberlain, £4 2s. 6d. was paid of an advance made by him for the sustentation of the prisoners who were in his custody at Corfe, Wallingford, and Sherborne, "so that the money

may be returned to the Chamberlain from the chattels of the aforesaid prisoners."

Who were these prisoners? It seems probable that they were some of the Knights who were taken at Mirabeau.

John was in France throughout the 4th year of his reign, and in the course of his wanderings he arrived at Bonport from Neubourg on Tuesday, July 30th, and on the following day he departed for Chinon, but on the way he received news that his mother was closely besieged at Mirabeau, whither he hastened with all speed; he arrived on Sunday, August 1st, and captured the whole of the Knights, more than 200 in number, who were besieging the place, and his nephew Arthur was also delivered to him there, so complete was the victory that "no one," John said in a letter to the barons, "no one saved himself by flight." These Knights were sent as prisoners to various castles in England and Normandy. Corfe, Wallingford, and Sherborne, the three places mentioned in the above extract from the Pipe Roll, received some of them. The advance made by the King's Chamberlain for the sustentation of the prisoners shows that they were political prisoners and that they were persons of consequence. How long they continued to receive sustentation from the King's Chamberlain is a questionable matter. The Margun annals state that 22 of the Knights taken at Mirabeau were starved to death in Corfe Castle. This seems probable, for on February 4th following, letters patent were sent to the constables of Bristol, Nottingham, Wallingford, Sherborne, Southampton, Marlborough, Porcester, Norwich, Oxford, Windsor, Northampton, and of other castles, giving strict orders to their custodians to send to Corfe Castle certain of the Knights, 24 in number, whose names are given, and who were confined in these castles. In the Pipe Rolls for the next year, 5 John, the Sheriff of Dorset makes a charge for supplies to 14 prisoners only at Corfe and Sherborne and for clothing for four of the prisoners. That some of these were prisoners who had been in captivity for some time, and were therefore none of the Knights taken at Mirabeau, seems probable from the fact that the payment

is stated to be for many years. Some of the Mirabeau prisoners had, therefore, disappeared by that time, and, so far as record evidence goes, there is no further allusion to them ; they disappear from Corfe and leave no trace. There is no mention of any of them in later letters which mention Corfe prisoners.

Mr. Bond in his history of Corfe Castle points out that a close letter sent to the constable of Corfe suggests that John had sinister designs in collecting and sending these prisoners to Corfe. "Constab' de Corf' sc'bit' p litt'as clausas q' faciat id q'd Thomas Cl'icus de cam'a 't Hug' de Nevill' ei dicent ex p'te R' de p'isonibus qui ei lib'abunt'r" what was to be done with them was evidently something which it was not advisable to put on paper.

The Brettons were given to making encroachments on the King's salt pits. In 1 John it was William de Bretton who was fined for encroaching on them ; now it is Walter de Bretton who has to pay 5s. 10d. for the same offence.

The payment of the ransom of Richard was not complete even in this fourth year of John ; 121s. 9d. was paid of the hidage levied in Dorset and Somerset for this purpose.

Hugh de Wells owes 3 palfreys for the grant of a charter from the King for having liberties in the town of Wells with fairs and markets.

The chattels of fugitives from justice, men who were charged with some crime, but who would not stand trial, were forfeited to the King, and Peter de Schidimor accounts for 10s. 6d., the value of the chattels of Peter, and 2s. that of John ; but what Peter de Schidimor, who was Sheriff in the first year of John's reign, had to do with it in the fourth year is not clear.

On the list of fines on Knights' fees of the third scutage is the Abbot of Glastonbury and the Abbot of Shaftesbury, who pays on 7 Knights' fees, the Abbot of Cerne on 2, of Abbotsbury on 1, and Sherborne Abbey on $2\frac{1}{6}$. There are a large number of names on this list.

William de Marcuill, Robert Wells, Elena Ostiarius, William de St. Clare, and Thomas de Windsor make fine for serjeanty, the first-named for passage and relief also.

There are also fines of the Knights of the honor of Dunster, also of Bologne and of Bath.

Whilst the subject of prisoners is before us it will be convenient to make some further remarks concerning them. Prisoners were supplied with food, and their chattels were frequently taken by the Sheriff to pay for it; by licence other articles might be supplied to prisoners as robes and money to the Lord de Crassay "q^{a} diu fu'it ī p'isona n'ra." P.R., 4 John, August 19.

Prisoners in custody for certain offences might obtain their liberty by making fine with the King; the fines paid by prisoners to be discharged from custody were sometimes paid partly in kind. Thus John le Tengre undertook to pay 100 marks and "10 fine hares, fair and good," of which he was to pay 40 marks and 5 hares before his discharge, and his sons were to be received as hostages for the remainder, which was to be paid in two portions, and on payment of the second portion the hostages were to be freed. (P.R., 8 John, April 28.) Wiomar' Brito made a similar arrangement, hares and all, and Rob. Weldebof, who was taken prisoner at Carrickfergus and imprisoned at Gloucester, promised 30 marks and one good hunter (chascur), and as four of his friends gave security for the payment he was discharged at once. (P.R., 16 John, December 21.) Hostages were also supplied with food at their own cost or that of their friends, but the men of Anjou must have been astonished at receiving, as a mark of the King's favour, a letter declaring that on account of the love he bore them he quitted their hostages of all expenses which they owed for food, for 350 silver marks of which he requested payment before Michaelmas.

Salt, wine, corn, and leather were apparently the principal articles of trade with this country, and Wareham seems to have had its share of the trade such as it was. Alexander of Wareham, received licence from the King at Gillingham on January 12, 1207, to carry one cargo of salt and leather into Normandy. (P.R., 7 John, January 12.) Lucas, of Wareham, safe conduct for himself and his ship in trading throughout the country on his paying upon

his effects and merchandise the right and due customs. Large quantities of wine were imported into the country and much presumably was made here. The seneschall of Poitou and Gascogne was commanded to pay £80 sterling for 80 barrels (doliis) of wine, which was bought by Pascald, the merchant de Belvoc', for replenishing the store in Corfe Castle ; the letter is dated 18 John, July 16, and was written at Sturminster Newton in the Castle, of which the remains are still standing on the hill above Sturminster Bridge, for the ruins, so far as my remembrance goes, show this date. The King was at Sturminster for two days on this occasion—namely, on Wednesday and Thursday, June 15 and 16 ; on the 17th he went on to Blandford. This wine, judging from the price, was intended for the King and his court ; the same price was paid for 26 tuns of wine (if the dolium and tonel were the same) to Bernard de Burdegal (P.R., 4 John, April 30), and even more was paid on the day for 103 tuns of wine supplied by those merchants—namely, 300 marks, which was about the rate of £2 a tun.

5 JOHN, A.D. 1203-4.

There are the usual payments in the earlier part of the roll.

Fifty shillings, the pay of the Chaplain at Dorchester Castle, is continued ; 50s. is evidently his fixed stipend. The keeper of the King's houses at Gillingham receives 30s. 5d. through Hugh de Neville.

Two of the King's falconers—one a horseman—with one assistant were at Dorchester from Michaelmas Day to S. Dionicius' Day (October 9) ; the falcons were in the charge of the same falconers to November 3, when Adam de Mora took charge of them to November 30, when they were sent to the King in France, the bearers of them receiving 40s. for their pay. The King, who had been in France for many months, returned to England on December 6, so he had not the enjoyment of them for long. The pay of Robert de Winterburn, the King's huntsman, was in arrear, but he received 110s. of the amount due to him and two marks for food supplied to the hounds ; the 76s. 3d., the balance of his pay

to November 30 two months, was paid to him a little later ; from which entry we learn that the pay of a Royal huntsman was about £23 a year, or £400 a year in our money. In which Winterborne did he live ? Was it Winterborne Abbas ? The cost of the 14 prisoners at Corfe and the garments for four of them have been noticed. £18 19s. 6d. was spent on the repair of the King's houses at Dorchester and of the vivarium there, but whether the vivarium was a stew pond in the meadows below the hill on which the Castle stood, or a reserve for deer, &c., is not apparent. Two approvers at Ilchester were paid 12s. 4d. for 74 days—twopence a day. A penny a day per man was not large pay, but it was sufficient ; it was the pension frequently granted by the King to his aged servants.

Sciatis q'd dedimus Joh'i de Constanciis lib'acio'em uni' deñ singul' diebus p'cipiend' toto temp'e vite sue ad scacc'm n'rm, &c. (Rot. Pat., Memb. 18.)

Their armour for trial by battle came to 17s. 8d. Notes on approvers, their armour, and trial by battle will be found in the former paper.

There was a very large expenditure on Corfe Castle this year, being no less than £246 10s. 4d. in money of that day. William de Boscus and Robert de Clavill were the viewers.

£56 17s. 7d. was spent on the King's chamber at Bere, where Elijah de Bere and Gilbert Calve were the viewers. Nicholas de Meriet paid 45 marks for Hugh Hakepeat "ut p'sit se redd'e religioni," "that he might return himself as professed in religion." Would that necessarily mean more than that he might return himself as a "cleric," and so perhaps be able to claim "benefit of the clergy" and other privileges ?

There was some mistake about the "donum ;" 45 marks charged to the men of Wareham and 30 marks to the men of Cranborne should have been charged to W. de Falcisia. Osmund of Sherborne, was also charged 10 marks, for which the Bp. of Salisbury should have responded, and Richard Fromund 20 marks, which was due from the Bp. of Winchester. According to the evidence

of the Sheriff, Brice Passmore, Godfrey Capel, Walter de Hordwell, Warin de Bichford, Robert de Cumweie, Adam clerk of Bacwell, and Humphrey de Wirkishal also appear on this list.

Henry de Turberville paid 10 marks for having seizin of 10 librates of land in Parue.

Hugh de Nevill was credited £75 for the purchase of one thousand fat hogs for the King's use, but he was only able to purchase 500. Most likely these were for provisioning the King's Castles in Dorset and Somerset.

For enclosing the King's garden at Marlborough £10 5s. 6d. was spent.

There is a long list in this roll of persons charged to the third scutage; the list shows the number of Knights' fees and parts of Knights' fees held by each, with a supplementary list under the head "Illi hũt quiet' p'bria." Those who had quittance by brief.

There was trouble with the bakers even in those early days, and regulations had to be made for the supply of bread of standard weight. At Winchester the white loaf was to be 30 sols. in weight (1½lb. ?), and the loaf of black bread 65 sols., and each baker had to imprint his seal upon his loaves, and guardians of the assize were appointed to see that the regulations were duly carried out. (P.R., 5 John, April 15.)

The letters patent of this year reveal a curious story about King John, which is new to me; the story of

KING JOHN AND THE JEWELS OF S. EDMUND,

as gathered from the Patent Rolls, is as follows:—

The King crossed from France to Portsmouth on Saturday, December 6th. He was at Marlborough on Friday, 10th, at Newberry on the 12th, Havering on the 16th, and Ongar on the 17th. From thence he went to Bury S. Edmunds, where he visited the tomb of the martyr, S. Edmund. Amongst the offerings at the tomb of this martyr in the Abbey Church were a fine sapphire and an equally fine ruby. Now John had a weakness for jewels. This is shown by the lists of his treasures committed to various persons to be kept for him, and he coveted these precious stones,

and would have gladly appropriated them. But even a King could not take jewels which were the property of a saint without the permission of their owner. Very likely the monks in the hope of saving their jewels pointed this out to him. At any rate the wording of his letter shows that he admitted that the jewels did belong to the saint and that no one could give him permission to take them. But a King who covets the jewels of a dead saint and is not troubled with a sensitive conscience will soon discover a way of possessing himself of them—John did—and the monks must have been much taken aback by the King's proposal. He could not appropriate the jewels, that he admitted, but he might borrow them. So he took the precious stones and promised the monks for the loan of them 16 marks a year, to be paid faithfully at his treasury, and the money might be used for the repair of the martyr's tomb. As to the jewels they should be returned and replaced on the tomb at the King's death. The Abbot and Convent of S. Edmunds, knowing the King as they must have known him, must have parted with their jewels regretfully ; they could scarcely have entertained a hope of ever seeing them again, and as a matter of fact it is probable that they were in the King's treasure chests when those chests were overwhelmed by the sea at Newark. But the monks were equal to the occasion. If they must lose their jewels they might at least obtain a concession from the King which would be of equal value to them and their house, so they followed the King to Lilley, where, two days later, they obtained a charter from him, which was to the effect that on account of "the reverence he had for the blessed martyr, Edmund" (whose jewels, remember, he had taken), he allowed the Abbot and Convent of S. Edmund's to revoke those of their lands and tenements which had been alienated by the custodians of their manors, whether monks or laics, without the consent of the Abbot and Convent.

Notes on a Minute Book (C. 12) belonging to the Mayor and Corporation of Dorchester,

With a few Passages from C. 9.

By H. J. MOULE, M.A.

A TWICE-TOLD tale is a synonym for dismal dulness. Now I am about to tell what, in part, has already been published to the world, and this makes me fearful lest I should be unable to galvanise the subject into any measure of interest for the members of the Club. Yet I have resolved to throw myself on your indulgence and do my best. For Minute Book C. 12, although it has been dipped into, has never, to my knowledge, been quoted in any approach to a complete way, and seems to deserve it.

It is a parchment-bound small folio, a shabby looking volume without, and roughly kept within; the writing is by a variety of hands, some of them far from skilful hands. It seems to have been an exceptional thing for the Town Clerk to make the entries.

Perhaps the nature of them may account for this. For I suppose his duties were primarily with the Mayor and Town Council acting in their judicial and legislative capacity. Now C. 12 appears to be the record, for by far the most part at least, of business done by the Mayor and Town Council as a general Financial Committee. The phrase used in this volume is not the Mayor and Town Council, but the Mayor and this Company order this or that. By the way this is not the Company of Freemen, the President of which was not the Mayor. The entries in the Book begin on June 30, 1637, and end on Nov. 24, 1656, but with a most vexatious hiatus. After Feb. 27, 1642 (3) we find this entry :— "By reason of the Warres this book was discontinued for fower yeares, and Another booke was made use of for the Towne business, &c." To my great regret I have not succeeded in my efforts to find this book. C. 12 has been carefully read and pretty largely extracted from, and so has the chief division of C. 9. This is a small folio of from 200 to 300 pages, bound in limp parchment, only about two-thirds full, and endorsed as containing Orders, Copies of Letters, Choice of Officers of Dorchester, Choice of Almspeople, and Compositions for Town Leases. The first division is on ff. 1 to 56, and extends from June 18, 1629, to Dec. 17, 1661, with one or two much later entries.

A choice of extracts will now be read, thrown together under three heads:—1. The dealings of Mayor and "Company" in Church matters, especially as relates to the Rev. J. White; 2. The defences of the Borough; 3. The care of the Borough and of the poor. The paper will end with some few unclassified remarks. The Rev. J. White, of Winchester and New Colleges, Rector of Holy Trinity and St. Peter's, Dorchester, was a leading promoter of the Puritan migration to New England, where his name and fame yet flourish greatly; and a man who, with all faults, had a sway here in Dorchester, which must have been founded on piety and ability. Proof of his high position here was given in a paper on C. 8, which is printed in Vol. X. of the Club Proceedings. As a supplement to this a few passages from C. 12 and one from

C. 9 are here grouped together. On July 10, 1640, it is Master White who is applied to through Master Mayor to effect a reconciliation between Constable Bale and one Gollop. But the next passage speaks for itself as showing a great, if selfish, value for Master White. "Nov. 12, 1647—Whereas the warden of new colege being dead and a new warden being to be chosen there is greate doubt that Master Jo: White our minister is to be chosen, and therefore to prevent it and to farther the busines about ffordington Parsonage that the towne send Master Benne and one of the Company wth him to labor in the busines." Master White was chosen, but declined the wardenship (see Hutchins). Further "this day it was agreed that on Monday next at eight of the Clocke in morning this Company be desired to be all here present and to make choice of an Assistant minister to helpe Master White in his weaknesse." In Oct., 1647, it had been agreed to pay £200 a year "out of ffordington parsonage" for this purpose. His weakness continued, and indeed ended shortly in his death. The "Company" continued likewise to arrange matters for him. On May 12, 1648, "it is ordered . . . that Master White and Master Ben bee desired to take course that on euery Sabboth day in morning when Master White shall be unable to preach himself that Master Ben may preach at Peters Church where this Company are for the most part, w^{ch} wee understand also will give very good satisfaction to the Towne in general." Let us hope that the regard for Master White did not chiefly evaporate in words and in going about to hinder his promotion to a distant position. But the following entry has an ugly sound. "June 23, 1648. Upon the failing of Master White's quarterly paym^{ts} from the parishioners of Trinity and Peters the same not making up the sōme of fower score pounds per annum . . . . . for his additional mayntenance" he is to have £15 a quarter partly from the "Steward of ffordington parsonage." This was *less than a

* He died suddenly on July 21, 1648, and lies in St. Peter's porch, where a memorial plain "brass" ought to be placed, we venture to suggest.

month before his death, the grief at which was deep. Three days after it took place the following entry was written in Minute and Account Book C. 9, f. 37 :—"24 July, 1648. It is ordered by Master Maior and the Company that Master Savage on the compan^{es} desire to [do] give in their names to Master White's executo^{r} five pounds to give it to the poore in Master White's name. And that Master Savage doe cause the porch to be hung wth black at the funerall and for one moneth after and yf it be stolen the Company will satisfie him for it." In a less degree another entry tells of good feeling towards the deceased. This is in C. 12 under the above date. "It was agreed . . . that the ffeoffees of Trinity Parsonage be desired to give power by their warr^{t} to authorize Nathaniel White his father's executor to receive . . . . . all tithes . . . . until there shall be a minister brought into the place of Master White . . . . ." Again, several years after, C. 12, Feb. 8, 1651 (2), a sum of £3 9s. 1d. "balance of his father's Acc^{t} due from the Brewhouse" is ordered to be paid to Capt. Nathaniel White, and out of respects to his father and the family it is ordered that he shall have given him out of the Brewhouse . . . the some of five pounds more as a boone at his departure towards Garnesey." It may be here said, by the way, that from one or two passages it seems that the Guernsey garrison was partly manned by Dorchester folks and refreshed with Dorchester beer from the borough brewhouse. One more entry relating to the Whites may be quoted. "Jan. 26, 1648 (9), Master Samuel White to be paid £4 14s. 0d. layed out for the ministers w^{ch} have preached here in Towne since his father's death. And forty shillings more for the entertainment of several ministers. . . . . at several times. And that his brother Nathaniel shall be desired by Master Gower (the new Rector) to pay him. . . ." Such are the chief notices in C. 9 and 12 of the White family. Passing on to other ecclesiomunicipal matters we find the Mayor and Company in great thoughts of heart about a fit successor to Master White. It may be noted here that the living of Holy Trinity, of old in the gift of the Crown, as St. Peter's still is, is in

the gift of the Trustees of the Grammar School and Napier's Mite Almshouse. Whether Master Mayor and the Company dealt in the matter as patrons, or only as influential advisers, at the time of which we are speaking, I know not. In either case they busied themselves much in the matter. On Sept. 22, 1648, Master Ben, Rector of All Saints', is to be "desired with the assistance of [Master Cole]. . . to ride unto Exter" to treat with one Master Ford and also with Master Gower, and to propose "for the encouragement of the minister" that he shall have £120 p. ann: and "60li in lew of the Ester Booke," and a house, "and that 4 sufficient men shall engage to pay him 40li euy quarter, clear of all taxes." Master Ben, we cannot but fancy, may have thought that a good Rector of Holy Trinity would not be so far to seek, and that he need not be sent riding up and down to search for one. But after journeying to "Exter" and, it seems, having come to an understanding, not with Ford but with Gower, he is despatched in the other direction. On Oct. 19, 1648, "it is agreed that Master Ben be desired to ride into the Isle of Weight to have conference with Master Marshal, Master Charroll, Master Vines, and Mr. Seaman of the *Assembly now at Newport. . . . . touching Master Gower. . . . . and to know their judgmts of his . . . . fittness to succeede Master White in this Towne." Their "judgmts" were favourable, doubtless, for in C. 9, under Jan. 24, 1648 (9), is a record of Gower's induction. He is said to have been "chosen by the major part of the feoffees of the said Parsonage, with approbation of the inhabitants of Trinity and Peter's." Master Gower seems to have won the good-will of the burgesses. At least the providing a new parsonage looks like it. On March 24, 1651 (2) we find mention of a house "wch Master Loder hath purchased for this Companie to be a house for the minister." And on March 31 we find £100 named as "the fine agreed upon with Master Gardiner for his house upon the Cornhill." It is true that this fine and £50 for repairs were to be paid first, indeed, by the

* In connection probably with the negociations with the King which were begun on Sept. 18, 1648. Pict: Hist: of England, iv., 384.

steward of Seaton Parsonage money ; but were to be "made good" to him "out of the sale of the old Trinity Parsonage house, the barne adjoining, and the garden behind the George, with the passage forth into the back lane belonging to the George." I may say, in passing, that a portion of this old Parsonage remains, and to some of the New England descendants of Puritans is almost like the Black Stone to the Moslem. Further, I have heard, but also heard it contradicted, that a house in Cornhill, next door to the Antelope on the south, was formerly St. Peter's Rectory. May this be the house referred to above? The mention of Seaton brings us to what seems to me a curious practice of the Mayor and Company. This was the buying of "parsonages," whereby in short that body became lay rectors and patrons of the livings. Seaton in Devon was long theirs. One or two other parishes are named as being negociated for at least. But I would speak particularly of Fordington. Fordington tithes are triply applied. Until about twelve years ago there was a Fordington Stall at Sarum, of which Canon Pearson was the last holder. Now I assume it is swept into the Ecclesiastical Commission. Then there is a Lay Rectory ; and lastly the Vicarage. I do not see the event recorded, but it is my surmise that on the Puritan suppression of Chapters Master Mayor and Company bought the whole prebendal, rectorial, and small tithes and presentation to the living such as it was. With the scanty data in our possession we ought not to be very hard on Master Mayor and his fellows. Still their providing for the spiritual wants of Fordington seems not to have given entire satisfaction. On Nov. 1, 1648, "ffordington men were heere wth Master Maior and desires a minister and Master Maior put them off till Friday sennight in the afternoone." Now the ever useful Master Ben had been asked to "enquire out an able mynister" for Fordington as long before as April 21. This minister was to have the "Vicaridge House" and £20 a year "out of the Impropriat Parsonage of ffordington," with some prospect of £20 more out of Seaton Parsonage. Poor pay, even in those times. It seems to have attracted only a very young

divine. On June 1, 1649, a substantial "augmentacion of his mayntenance" is ordered for "Master John Loder now preacher at ffordington . . . . if ffordington men will make the Vicaridge worth fiftie pounds p annū . . . [and] that Master John Loder . . . do submit himself to be ordained minister, within three monethes, or as soon as by his age he be capeable of ordinacon." This came to pass it seems, for he remained minister of Fordington until Apr. 4, 1656, when he notifies to the Mayor and Company that "hee was by the providence of God likely to remove to London in Case hee and his wife should like the aire w^{ch} yet they are uncertaine of, wherefore hee craves leave of the Comp^{e} to retaine his propriety in ffordington until Mich$^{mas.}$" The Loders quickly decided in favour of London air, as appears from the next quotation. Arrangements for stipend were again faulty in 1656. On April 30 "there was an answere given to ffordington men in order to their demands for more mayntenance to their minister." The Company say that by "ordinance of parliam^{t}" they are bound to pay only £40 a year, which they have done. They promise, however, that "when they have another minister" at Fordington the Company will "endevor to give him satisfaction." It was the least they could do, for while Fordington was put off with £40 a year out of its tithes for its sole minister, on June 20, 1656, the Company were treating with Master Gower for bringing in an assistant minister for Trinity and St. Peter's "that may enjoy the 80^{li} p Annū granted upon the charter of ffordington parsonage." This brings in the subject of lecturers, of which the clear-headed Selden *says: "If there had been no friars, Christendom might have continued quiet and things remained at a stay. If there had been no lecturers, which succeed the friars in their way, the Church of England might have stood and flourished at this day. Lecturers do in a parish church what the friars did heretofore, get away not only the affections but the bounty that should be bestowed upon the minister. Lecturers get a great deal of money,

* Table Talk, Cassell's Edition, pp. 71 and 99.

because they preach the people tame, as a man watches a hawk; and then they do what they list with them." Master Gower was much of the same opinion as to the encroaching character of lecturers. He promises his help in finding an assistant "if the Comp^e will declare under their hands that they repute him minister of Trinity and Peters in succession to Master White notwithstanding such third minister to bee now brought in. . . . ." An entry in C. 9, of a few days later—viz., June 26, 1657, seems to be in full compliance with Gower's demand. Various negociations were accordingly made with a view to engaging a "lecterer," but no result appears to be recorded in C. 12 or 9. It is now time to bring to a close this already too long section on Church affairs. It ends with a few isolated remarks on points therewith connected. Here is an order about official church going. Oct. 29, 1652. "It is ordered that from hence forward the precedent Mayor shall be desired to sit in seate with Master Mayor at Peters Church at all times, especially the Sabbath Dayes." Here is a record which, as far as I know, stands alone in C. 8, 9, or 12, as showing due feeling to the Episcopate. July 28, 1637. "It is agreed that the Bishop be entertained at his visitacon and be sent unto to Bristoll and invited . . . . . it is resolved to move Master Dashwood to lodge him and Master Maior at a publike charge to entertayne him." And the Mayor and nine of the Company agree to subscribe 10s. each. Finally, as regards this section, let me note that the old Church terms, such as Good Friday, "Christide," and even "O^r Lady Day" continued in use, the last occurring so late as July 18, 1656.

2. The defences of the Borough, including both men and their arms and also fortifications. Now this is the subject concerning which this book has already been quoted in Hutchins' "History of Dorset" and elsewhere. Still it seems best to give some sort of complete sketch here of the passages relating to this section, without omitting those in Hutchins. But first let me say how very great a loss it is to all interested in the history of Dorchester that in C. 12 precisely the most interesting years, as regards the

Civil War, are unrecorded. The discovery of the "other book" referred to at the beginning would be a welcome find indeed. It need hardly be said that all the orders in the 17th century relating to intended defence of Dorchester are connected with the Civil War. This may, therefore, be a good place to note, by the way, two entries about one great cause of that war—viz., ship money. In C. 9 we find "Nov. 23, 1636. Rate to y^e^ King's Shipping." And it is recorded that at a meeting of the Mayors of Dorset and and the Sheriff at Blandford about "a rate to be set" for £5,000 for a ship, the Sheriff rated the corporate towns thus :—

Poole and members ...	£30	Lyme Regis and members	£40
Dorchester ,, ...	45	Bridport ,,	20
Wareham ,, ...	25	Blandford ,,	25
Corfe Castle ,, ...	40	Shaston, infected with the Plague	00
Weymouth and Melcombe Regis and members ...	35		

Again in C. 12, under the date Jan. 22, 1639 (40), a warrant from the Sheriff for raising £60 in the town for ship money is recorded. And almost directly after—*post hoc* if not *propter hoc*—on Feb. 12, 1639 (40), in connection with a Town Lease is a direction "to make up the Towne wall sufficiently between the garden [in question] and Master Hiat's garden before harvest next." *But it was on July 1, 1642, that the Dorchester folk began really to stir in the matter of holding the town against the foe. On that day the Mayor and Company had before them "a noate of the Stoare of powder in the magazine in the Shirehall, Sept. 27, 1639." County Powder 39 cwt 18 lbs; also 3 barrells of the "Towne Store." This last was ordered to be moved to the "Counting House in the Towne Brewhouse" with the town's lead and match. On July 19, 1642, was brought to "Master Maior from the Postmr of Shaston" a copy of an

* There is in these books an earlier mention of walls. In C. 9, under Nov. 12, 1633, there is complaint that Fordington people have taken the ditches wherewith "this Towne is surrounded, and now they seeke to gayne from us parte of this Towne Walles."

ordinance of Parliament. It empowers the Mayor and his fellows to muster the inhabitants who are "fitt for the warres and them array, weapon, traine, exercise, and put in readines" to resist attempts against the town. This ordinance is to be handed to the judge at the assizes to shew why "The Souldiers do in their armes watch the magazine . . . ." During the assizes the gates and wards are to be made fast every night at 8. This was entrusted to Master E. Dashwood for "Bankes his doare;" Master Bushrode for the east end of the town—viz., the East Gate and Standish's Corner and Boyes' Corner; Master J. Bray for Glippath; Robert Manuell for the West Gate; and T. Poole for the "Fryery Lane." On Oct. 7 in this same year, 1642, fresh orders were given. "Henry Bushrode is appoynted to keepe the key and to see the two east Gates and that on Gallewes hill shut at night and opened in morning and is to have for his paines 6^{s} 8^{d} a quarter. Henry Mory is appoynted to the like for the 2 West Gates and at Glippath for the like reward. Roger Turner is appoynted for the like for the 3 sowth gats at 5^{s} a qter. They are to open all the gates at breake of day and to shut all the back gats at candle lighting and the East, West, and Sowth mayne gates between 8 and 9 at night." Again under Jan. 11, 1642 (3), we find the following order: "Keiers for the gate. It is ordered that the Keyers of the Gates shall wayt at the 3 several maine Gards from the time of the discharging of the ward until the Watch come in place and so likewise in morning to stand at the gates betwixt the Watch and the Ward. And not to deliuer the Keyes to any unless to the Captaine of the Watch or to the rounders or by their appointment." These two passages are those quoted in Hutchins' History. It is impossible of course here to go into the questions to which they naturally give rise. I can simply repeat what I have more fully said elsewhere, that, patched up here "made good" there as we saw, rebuilt in another place, in my humble opinion it was yet, speaking roughly, the Roman wall that the "rounders" perambulated in 1642. The latest direct mention of the gates is on May 26, 1642—viz., "Master Steward shall pay to Henry

Bushrode 24^{s} for keeping, shutting, and opening the east gate for 16 weeks." But the gates come into a little mention in a passage or two about the garrison. This garrison, at least its pay, was a difficulty. On Dec. 2, 1642, it is ordered that "the pay for the souldiers raised and mayntained by seũall persons and now under command of Captaine Lewes shall be collected for all tymes to come . . ." by Master Josiah Terry for Trinity parish, Master Natth^{l}. Bury for Peters, and W. Day for All Saints. Again, on Jan. 11, 1642 (3), "There shall be two companies raised in the Towne . . . in each . . . 80 men. whereof as many musketeers as may be, and none of Cap : Churchille's company to be under the command of Cap : Jos : Paty, the other under Cap : John Seaward and eũy man to be paid 2^{s} weekely . . . . to watch eũy third night and to appeare at their colo^{rs} to be exercised one afternoone in a weeke and to be paid 12^{d} a day. . . . ." Then in the margin are the names of the captains, lieutenants, ensigns, serjeants, and drummers of each company. By Jan. 24, 1642 (3) one hundred and forty men were enlisted, and we read that besides these in pay, and those who contribute the pay "there are in seũall howses fitt to watch by 7 in the night at the bow guard (that is, by the way, at Cornhill Corner) and 9 in the day to ward, 230. . . ." Of these "2 [are] to ward at eũy towne gate, 1 at Glippath and 1 at the Gallowes and one upon the Tower [of St. Peter's], and upon eũy Saboth day and fast day 2 on the tower. . . ." Very good, but on Feb. 3, 1642 (3) we find an order that, as many had refused to pay this rate, imposed for pay of 160 soldiers, at 2s. a week, to watch, ward, and muster one afternoon weekly, this payment shall cease and the constables "shall againe warne both watch and ward." That is, we may perhaps take it, the burgesses were called on to do personal, unpaid service in turn. However, as to the garrison, it is ordered that "those souldiers bee not disbanded but be mustered once a weeke, thursday yf it may be or els friday and shall be paid viii^{d} a peece weekly for their mustering." It looks suspicious, too, that on Feb. 24, 1642 (3) £6 are ordered for the three captains of the Town

(including Capt. Churchill perhaps) to pay "poore souldiers" that served the 2 days this week in the Borough (?) arms. Somehow this brings to mind the recruit who served at the wappenshaw in the Tullietudlem arms. Whatever were the difficulties, however, the Mayor and the "Company" persevered. On Feb. 27, 1642 (3) "By consent of the Mayor and Capital Burgesses the Churchwardens and Overseers of each of the 3 parishes have made a rate for payment of soldiers." The names and addresses of twenty-eight "as now this day listed" are given. The odd thing is that, except W. Wilson, "late of this town stuff-weaver," not one of them belonged to Dorchester, one coming from so far off as Taunton. Here this group of warlike notices must end, brought to a sudden full stop by the vexatious "discontinuance of this booke by reason of the Warres." The substituted book would perhaps give us quite new lights on various points now dim and doubtful. Especially there is the sojourn of Cromwell at Dorchester, so imperfectly recorded in history. But, as yet, that much-desired book appears not.

3. The Care of the Borough and of the poor, taken separately. Thoughtfulness for the well-being of the borough is shown in the very first page of the book. On July 14, 1637, "Master Maior ppownded that a day be considered for a meeting of all the Company to examyn the debte of the corporacon and what meanes may be used to come out of debt. . . ." It was decided to meet on July 31 at 7 a.m. I have not observed any record of what was done. The borough finance was complicated as to sources of income. There were fines on renewal of lives in leases of market standings, and no doubt in other leases. There were rents of various pieces of property, such as two plots called the *School Closes, apparently where the Grammar School cricket ground and Messrs. Pope's malthouse now are. There was income, over and above stipends, from Seaton, Fordington, and other "Parsonages." And there was this "Brewhouse." I am not able

* But from one entry this rent seems to have gone to school salary.

with certainty to speak of the institution, although pretty sure that a thorough collation of the mentions of it in C. 12 and other minute books would render a clear description possible. As far as I can make out it stood adjoining the "hospital" or workhouse, where South Terrace now is. It seems to have been for some years worked by the Corporation with a staff of four men, and the beer sold at a profit, whether retail as well as wholesale I know not. Further the brewhouse was the spot where other borough business went on. There was a small sum of money, about £200, belonging to it, apparently a benefaction intended to be lent at moderate interest to tradesmen and others. Besides this it was at the Brewhouse premises that on one occasion at least (see Feb. 23 and June 11, 1649) a "ship loade of Newcastle coles" was received and sold at no small profit. On Sept. 17, 1649, it was resolved to let the Brewhouse at £200 a year, the tenants further to take over "several parcels of Fast Money and Almshouse Money w^ch^ are now in the Brewhouse being 226 10 8," and for this they are to pay a yearly interest of £20. This seems to have been carried out, for on April 26, 1650, mention is made of the "ffarmers of the Brewhouse." Whether it was pure love of temperance or partly jealousy of rival beer sellers seems a little doubtful as the motive of the following entry:—Apr. 22, 1640. E. Streete desired a license to sell beer "in the lower parish" (All Saints). This "was denied. The Company will sett up no more alehouses." Before quitting beer there is one more passage which should be noted. On June 27, 1640, owing to the "making of mault and drying it in oaste in this borrough" being dangerous, all malters are to dry all their malt "with coal in killes." This precaution leads us to mention of others against fire, which in 1613 and at other times was such a terrible destroyer of Dorchester. On May 13, 1640, the churchwardens of St. Peter's are ordered to send for 24 "tankards," 12 to be "hanged up in the church." These were leather fire buckets I suppose. Again on Dec. 8, 1653, two men for each parish are told off "to see and veiw iff there bee any badd or dangerous chymnyes or mantells . . . and to see

that all psons keepe their wells, buckets, ropes, tancketts, malkins, and ladders fitt to make use of uppon occasion. . . . ." But the great effort against fire was made on June 15, 1649, when all the inhabitants were summoned to meet the justices and company at hall to confer about "something beneficial to the Towne" at 8 a.m. "And that then it be proposed to them what each one will contribute towards the raising of XXX^{li} or XL^{li} for buying of a brazen Engine or Spoute to quench fire in times of danger." Then on Dec. 14, 1649, there is an order for £35, more or less, to be paid to Master W. White for the same, "which he bought at London. And that the Towne Steward do in the most convenient place in the Shirehall make a place with fir boards for the securing and placing of him for the best ease and conveniency of use." From other sources I gather that this "brazen spoute" was simply a great syringe, held up by two men and worked by a third. Master Mayor and Company were as watchful against pestilence as against fire. In C. 9, under June 6, 1636, we read that "the wagoners shall be warned in regard of the pnte danger of sicknes in and from London to forbeare to bring any more passengers without sufficient billes of health under the hands of the ministers and churchwardens from London. . . ." Again in C. 9 on Oct. 7, 1636, it is ordered that no goods brought by Richard Shank, "one of the waggon cariers," or any other carrier, from London are to be admitted to Dorchester without the consent of the Mayor and Company. Again on Oct. 20, 1641, waggoners are ordered to bring no one from London by reason of "the sicknes of the pestilence." Moreover quarantine was enforced. In C. 9 under July 10, 1637, it is minuted that "Whereas J. Greene . . . . tailor, contrary to orders went to London and has since returned and gone to his house the backway . . . . it is therefore ordered that the barne of Raph Perryn in ffrome Whitefield be procured to harbor the said Greene in or otherwise in the Coller Maker's howse there, and two wardemen bee set to attend them (his family was with him), and the charge for their diet and physick to bee borne . . . by the whole Towne out of the

money remayning in the Churchwardons' hands at the last ffast, vizt., XVIII$^{d.}$ weekly." At the same time T. Walden for a like offence was placed in that building, of the two above, not occupied by Greene. In C. 12, under July 26, 1637, we find an order for taking off this quarantine after the people had been "kept out of the towne . . . by the space of XIX. daies." Precautions were taken against infection from other places also. For instance, on May 29, 1640, on account of a report that the plague is at Taunton "a ward is to be charged" at West Gate and at Glippath. Nor was this relaxed until Dec. 8, "God having in mcy stayed His hand w^{ch} lay heauie in seuerall p^{ts} of this Cuntrie." In other respects, too, thoughtfulness for the burgesses is shown. One or two entries only, taken almost at random, must suffice as proof of this. On Jan. 20, 1636 (7), the Fordington people are reported as having made "a comon trade way with their horses, cartes, and cariage over the bowling ally." The offenders are to be presented next law day. Then as to the Town Library, the Catalogue of which is in the Corporation strong room (C. 10), and some of the books are at the Grammar School, at least probably they are from that library. On March 24, 1640 (1) it is ordered that Master Forward, Usher of the Free School, is to be Librarian at 20s. a year, with four sacks of coal "to air the roome and books." He is to suffer no clothes to be hung in the room. Again, on Jan. 29, 1639 (40) there was an order made "to have a buy law made and confirmed at next Lawday for paving the streets at eu^{y} man's charge, except X li. out of the Brewhouse to pave publik places." Space will not allow us to say more about the Grammar School than that the Mayor and Company took great interest in its affairs, although officially not in their hands but under "feoffees," In particular they exerted themselves mightily to get rid of Master Reve, an inefficient master. Under care of the borough we may class a discussion with the Earl of Suffolk. From the Weymouth borough archives, and doubtless from many other sources, we may learn that in times when Members of Parliament were paid it was a common plan for rich and influential men to get from Corporations

leave to nominate their members of Parliament and to undertake to pay them. On this understanding it was, I suppose, that the Earl of Suffolk proposed Sir Dudley Carleton as an M.P. for Dorchester. But on Feb. 26, 1639 (40), after a second consideration of this, the Mayor declared that most of the Company desired to choose townsmen. And on March 13 this was carried out by the Mayor, Burgesses, and Freemen choosing *"the Hon^ble. Denzill Hollis Esq," and Master Dennis Bond, one of the capital burgesses, to "be burgesses in the †Parliament to be holden on April 13." We must now take up an interesting branch of this section—namely, the care of poor and distressed persons, on the spot or at a distance. For the help of the Dorchester poor there were the hospital and the fuel house.‡ The former, as far as I can gather, was for the employment there of women and children, and for teaching reading to some of the latter. At one time the making of "bone lace" (whatever may be the exact meaning of this) was the chief work; but on Sept. 11, 1640, there was an order to stop this and to teach spinning or "burling" instead. Then on Feb. 6, 1649 (50), there is a resolution to consider "the setting the poore on work in spinning of worsted, and knitting of stockings and also of setting up a trade of making sackcloth." It gives a vivid idea of the spreading of trades over the land then, as contrasted with the centralisation of them now, that the sackcloth weaver of Great Toller was to be consulted. It is not expressly said, but seems pretty surely to be the case, that this last resolution applies to the hospital. I do not see in C. 12, or elsewhere that I can recall, that the hospital was such in the strict sense of a guest house, affording the poor an actual dwelling like a work house. But it is clear that the hospital whether of itself, or viewed as one establishment with the Brewhouse, possessed funds. Whether these partly consisted of profits on the stockings, &c., made in the hospital, or not, I am not sure. An instance of the use of the

* Buried in St. Peter's Church.

† This must be the Long Parliament.

‡ See Hutchins' Hist. of Dorset, 3rd Ed., ii., 397.

funds will be quoted presently. But now we turn to the Fuel House. Its situation in the town is not indicated as far as can be seen. Its purpose was the storage of fuel when cheap, to be sold at a low price to the poor in winter. For intance on May 19, 1641, there is a memorandum of there being in store 30,000 "turffs" at 20s. per thousand, and 13,400 faggots at 30s. In Ireland turfs would mean peats, but not here. There is indeed peat in the West Ward; but the turfs came it seems from Puddletown Heath, where sphagnum grows only in small patches, now at least. On May 27, 1652, W. Levett is made overseer of the fuel house, and he is "to go into the Heath the next weeke to buy turfe and agree for the carridge of the said fewel." The turf was doubtless the top "spit," comprising the heath, grass, and the roots of the same. Such turf was used largely in my remembrance, if not still. On March 29, 1650, it was reported that the sale of fuel, during the past winter doubtless, produced £19 15s. 11d., meaning a loss of at least £10, as is gathered from other entries. We now pass to the care of the poor in sickness. On Dec. 1, 1640, there was an order to pay £5 to Peter Sala Nova for cutting off Giles Garrett's leg. This sum was to come out of the £10 yearly payable out of the hospital "for pious uses." Soon after, on Feb. 17, 1640 (1), there is another bill, of £6, from Capt. Sala Nova, as he is here called. This man's name occurs several times in the Archives of Weymouth, where he seems to have lived. His name looks as if he were from Italy, but he was in some way connected with Ireland. To forestall one out of another group of quotations, on Feb. 11, 1641 (2), Master Mayor was requested to give, out of a Fast day collection of £45, £3 to "Peter de Sala Nova his wife's mother and sister and her husband which came lately out of the Kingdom of Ireland for feare of the Rebelles." He was by no means the only medical person employed. There was a quasi "parish doctor" paid by the Mayor and Company. On Feb. 15, 1649 (50), Master Losse gets £8 as "fee as physician in taking care of the poore of the Towne" for a year, for instance. But this town doctor does not seem to have been always expected, or

perhaps trusted, to take serious cases in hand. For example on June 14, 1654, there is an order for the widow Devenish "to be sent downe to Master fforrester for cure of her distemper." This was serious evidently, for the pay was to be more than £15; "out of the Towne purse V li., out of her owne state V li., out of honest people's purses V li., and so pportionably." During that year Master Colston received only £4 10s. for "physick given to the poor." Besides these and other doctors there were doctoresses. Canander Haggard had had £3 on account. On Jan. 5, 1654 (5), there was an order "to pay her" £3 more "for finishing the great cure on John Drayton otherwise Kense." Can this odd name be a mistake for Cassandra? Several other lady doctors are mentioned, for instance "Master Phillipp Davis his wife of Martinstowne." It is noteworthy that on Apr. 27, 1649, £1 was ordered for "the wedo louiburd to helpe hir to the bath," for relief of rheumatism, I suppose. But some, not for illness but for poverty, were helped farther than Bath. On Apr. 4, 1651, a church collection is proposed "towards the conveyance of 3 familyes w^{ch} are poore and unable to subsist here into Ireland for the planting of that Country." Which was done, for on Apr. 24, Benjamin Hoskins is ordered to have £4 for his horses to Bristol and conveying thither of three poor families going to Ireland under Capt. Ridout. But this invasion of Ireland might be called only *quid pro quo*. Much money had been given to Irish fleeing hither from the rebels in their own country. Indeed one instance looks as if the Irish were at that time more upheld when in want than the English. On July 2, 1642, two distressed persons were relieved. An Irishman was to have £2. The widow "of a certain man of Wymborne killed by theeves and robbers, who were (I suppose the man and his wife) the children of godly parents and under that consideracon their condicon tendered to the people," was put off with 15s. But the £2, above, was a trifle compared to like payments before and after that date. On Apr. 20, 1642, Master Whiteway is to be "intreated" to receive the Lady Kerry and her company, his charges to be paid back out of "the money for the distressed in

Ireland." At the same time £3 are to be given "to Master White of Ireland his phamyly." And similar sums were given to the same "phamyly" repeatedly. Then long after, on Nov. 18, 1653, it is recorded that the overseers of St. Peter's had spent £7 16s. 9d. "upon extraordinary charges of people w^ch^ come out of Ireland." Again, we find large sums sent to the distrest in England also, whether from fire or pestilence. One example of each must suffice. On July 23, 1640, Master White and the other ministers are to be moved to collect for the distrest in Taunton, at this time of pestilence." No less a sum than £60 10s. was sent. And a few days after, on Aug. 5, they sent £40 to Yeovil where fire had caused great loss. It may be here noted that, while a post to London is spoken of, on one occasion a small sum was given to the poor here because the Company did not know how to send it to "Lancasheere," for which it was subscribed.

It is now fully time to close this paper with a few quotations which cannot well be classified. First, as to the trade of the borough. The evidence on this subject in C. 12 is not full. There were a number of standings in the market. On one occasion 19 are enumerated as in the East and West Rows. This looks as if they were in some place running North and South—namely, in Bull Stake (mis-called North Square) or Cornhill. If so these 19 were only a part of the total number. For there were some, apparently many, in High Street. For instance, one is described as being in front of Trinity Church door. Some of them were held by people from a distance, a chandler from Cerne Abbas, for example. Dorchester was much connected with the then great fair on Woodbury Hill. On Aug. 31, 1653, a remittance to poor folk at Marlborough is ordered, but "deferred until after Woodbery fair." But more noteworthy is an order of Sept. 1, 1648, that ". . . In respect the publike thanksgiving falls out to be on Woodbery fair Eve, at w^ch^ time most of the Towne will be from home, Master Ben be desired to observe the Wednesday following for a day of thanksgiving." I find a passage which seems to imply that at least one Dorchester man was a merchant to other

countries, not only a retail dealer. On March 11, 1652 (3) Master Mayor Cole and H. Hobbs agree that the latter "shall serve Master Mayor aforesaid as an apprentice the space of six yeares in New England. . . ." We have seen that Master Mayor and the Company took much thought about relieving the poor. They also strove to please the rich and powerful. One quotation on this matter must suffice. On July 18, 1656, "It was resolved that Master Bury and Master Val: (?) Stansby bee desired to ride to Blandford on Wednesday next to invite General Desborough to a private lodging at Master Stansby's house, and that there bee a Gallon of sacke and a sugar loafe psented to him from the Towne together with a fatt sheepe." In the margin is written "Send a gallon of White and Clarret." Then follows, "That the Judges also bee psented with a gallon of wine, 2 sugar loaves, and a fatt sheepe." It was wise to mollify Desborough. He, you remember, was one of the major-generals just lately commissioned by Oliver to carry out his military despotism. It is rather a long leap down from Pasha Desborough to Town Beadle Nathaniel Bower. But as we are now taking up isolated quotations we may here record that on June 3, 1640, it was ordered that a new coat should be made for that official. It was to be of black cotton "gathered and wth ii long skirts." In this dress he "shall walk with a painted staff of his office." But to his lasting disgrace he would none of these insignia. This is recorded on June 5, and further that he was dismissed and banished from Dorchester for his bad taste. The last of the many points touched on in this long paper must now be disposed of. I confess myself one of those fossilized persons who wished that St. Peter's clock and chimes could have been improved instead of being improved away. I should have wished it much more earnestly if I had then known what this book, C. 12, tells us. Whether any part of the mechanism of the clock and chimes was original I know not. It is very probable, although the chime-barrel itself was modern. But the original machinery was two hundred and fifty years old, and was paid for by St. Peter's parishioners. On Apr. 29, 1640, it was "agreed on

that the town chest be not charged wth Peter's parish Clocke and Chimbs, but that the prish may pay wt is expended." Yet the clock was kept in order by the town, at least later. On Dec. 27, 1650, "J. Roberts and Matthew Benn have undertaken betwixt them to keepe the Clocke at Peter's Church in good order . . . and that Bennett shall ring eight a Clocke at night and four in the morning." So does Haskett now at eight, giving the day of the month after on the treble; but in the morning he is two hours later in summer and three in winter than Bennett was. Now this talk of hours puts me in mind to close this long paper. Long indeed, but most imperfect. It began, and it ends, with a plea for indulgence. The silver lode of Laurium was mined by the Athenians and smelted. But it has paid the moderns to smelt the slag over again. So this book, C. 12, has been worked by me indeed, but not worked out, I painfully feel. This needs an expert, and an expert with unbounded leisure. My ignorance as to various anomalies which more or less dimly show themselves in C. 12, and similar books has been a dreadful difficulty. I can but name the apparent distribution of church collections by Mayor and Company instead of by Minister and Churchwardens as one puzzle, and the outlay on and control of the Shire Hall by the Mayor, &c., as a second, and the questionable status of Dorchester as capital of Dorset as a third, out of several matters on which I am at a loss. Without going beyond the few dingy minute books in the Town Hall strong room there are materials whereof a thorough expert would do for Dorchester at least as much as has been done in "Social Life in a Southern County" for Lyme Regis. Perhaps the coming author may be among this company. Veniat. For even as I have written my dull tale a vision has shone clearly, and more clearly, of a very charming little old borough. The making up of the wall, the gates slamming to at candle lighting, the Mayor and ex-Mayor "sitting in seate" solemnly in St. Peter's, the laying in of turf and furze for the lowly, the laying out of sack and claret and fat sheep and sugar loaves for the high and mighty, the exodus of "moste of the

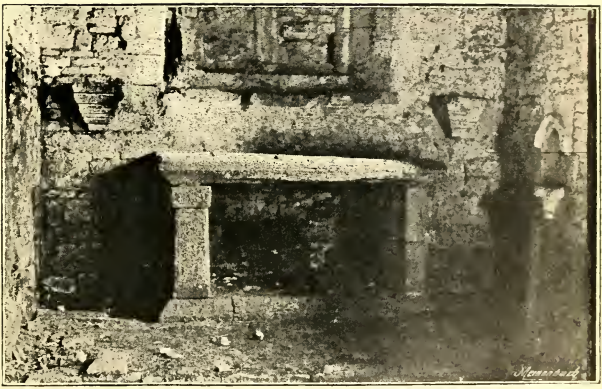
towne"-folk on Woodbury Eve, the mullion windows of the Shire Hall, the dozens of "standings" on market days—surely here is the making of a picture for the coming word artist who shall cause the minute books to sit for the portrait of old Dorchester. Veniat venturus.

The Ancient Free Chapel of Corton.

Read before the Dorset Natural History and Antiquarian Field Club on Wednesday, August 9th, 1893.

By the Rev. W. MILES BARNES.

CORTON CHAPEL, a highly interesting building, was a free chapel. A free chapel was so called because it was exempt from the jurisdiction of the Diocesan. Those chapels are properly free chapels which are of the King's foundation and by him exempt from the Ordinary's Visitation. Also chapels founded within a parish for the service of God by the devotion and liberality of pious men, over and above the mother church, and endowed with maintenance by the founders, which was free for the inhabitants of the parish to come to, were therefore called free chapels (Jacob's Law Dictionary, A.D. 1744). Free chapels, possibly through fear of the abuse of their freedom, were generally on lands which belonged, or had belonged, to the Royal demesnes. I do not find Corton amongst the "terræ regis" in Doomsday, though it appears to have been held of the King after the Conquest by Roger de Curcelle. There is mention of the chapel in 1341, when Hugh Courtney, Earl of Devon, held both the manor and the chapel, but the chapel must have existed long



ANCIENT ALTAR, CORTON CHAPEL.

before that time. Until further documentary evidence is forthcoming (and it is not improbable that some further information may be gleaned from ancient documents) it will be safest to fix the date of it from the architectural details of the building. The oldest feature in it is the S. doorway, which could not be much later than Transition Norman of the latter end of the twelfth century, Henry II.'s reign, and it may, I suppose, be much earlier.

It seems probable that the original building to which the doorway belonged was a rectangular building without chancel, and that the chancel was added in the 13th century ; the east end of the church, the walls, with the east and south windows, as well as the piscina, are of that date. The square head of the south window, which was originally a 13th century lancet window, as well as the head and tracery of the east window, are of course of later date ; they are insertions of the 15th century, probably by one of the Courtneys, and about the same time the brackets for the images on either side of the altar were inserted in the walls. The ancient altar step and some of the tiles still remain *in situ*, and I have seen portions of encaustic tiles which were found in the building, but none of the fragments were large enough to show the pattern. The north doorway blocked up may be traced in the wall outside.

But the most interesting and remarkable feature of the church is the altar, which still remains in its original position. What the date of the altar is it is impossible to say definitely ; it could not from its construction be later than 1400 ; its form, and the details, such as they are, speak of still higher antiquity. There must have been an altar here in the 13th century, but the rude workmanship of the altar slab, so much ruder than the 13th century work contained in the building, lead one to suppose that the slab belonged to the earlier chapel, and was removed and set up here, as you see it now, when the 13th century chancel was built.

It might be asked how it was that notwithstanding the stringent orders for the removal of stone altars from all parish churches this one was allowed to remain. The answer seems to be that free chapels were suppressed and the revenues taken away by the

Chantry Act in 1 Ed. VI., whereas the order to remove stone altars was issued in 1550—three years later. As the chapels were then closed for public worship this order did not affect them. Corton Chapel seems, however, to have been used as a private chapel after this date. For when two years later again—namely, in 6 Ed. VI., 1552, by Royal Commission, inventories were taken of "all manner of goodes, plate, juells, vestryments, belles, and other ornaments belonging to or apperteyning to any churche or chappell" the whole of the ornaments then in the chapel—namely, a chalice, one vestment of blue velvet, one bell, one surplice, and two tableclothes—were committed to the charge of custodians for the King, and nothing was left for the service of the church as there would have been had the chapel then been used for public worship. The custodians were Sir Thomas Waters (curate), William Hebbes, and Owen Hebbes (Record Office, press mark "Q.R., Church Goods, Dorset, $\frac{2}{17}$"). There was, therefore, a curate, though there were no public ministrations, and the presumption is that he was then serving as private chaplain to the Hebbes. Of the other custodians, one, Owen Hebbes, who died in 1567, was Lord of the Manor and chapel.

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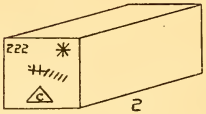

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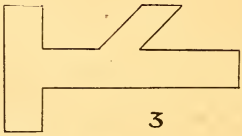

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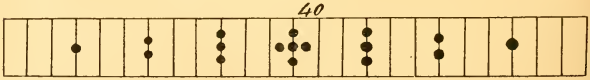


Some Local Stone Marks.

By THOS. B. GROVES, F.C.S., &c.

(The Numbers in Brackets refer to the Plate of Marks.)

THE occasional finding of Roman remains at Portland gives reason to suppose it was at some time occupied by that people. But there is not, so far as I am aware, any evidence of their having utilised the vast beds of valuable stone lying at their feet within a few yards of the surface.

In the report with reference to the selection of stone for building the new Houses of Parliament, presented March, 1839, it is stated that the old Church of St. Andrew's, near Bow and Arrow Castle, the Castle itself, and Wyke Regis Church, all 15th century buildings, if not in the case of Bow and Arrow Castle more ancient, are built of Portland stone. Coker, however, states the old Church of St. Andrew, dated 1475, was built of Caen stone, imported from Normandy, implying that the Portland quarries had not been opened at that time ; but in this he is probably in error.

It seems that prior to the 17th century Portland stone was not raised for export, but only for local use. The Banqueting House at Whitehall was the first public building in which it was used,

but since that time (about 1610) it has been extensively employed in many of the more important public buildings of the Metropolis, as it was found to have in addition to the usual qualities of a good and beautiful freestone the advantage of being able to resist the pernicious influence of the atmosphere of London. We must therefore not expect the stone marks used in the Island to date back to a remote antiquity—they are not "wold as Aggern"—though at first sight they seem to offer a field for antiquarian research and look somewhat cabalistic. This is partly owing to the fact that Roman numerals composed of straight lines are more easily cut with the chisel than are the usual Arabic figures, more or less curved in outline.

The convenience, the necessity in fact, of marking blocks of stone, so that the merchant and the builder might know by rapid inspection the weight, quality, and quarry source of each block is evident; the more so as the strata yielding stone are numerous, and the quality often varies according to geographical position.

The earliest marks that I have seen I copy from a manuscript account book kindly lent me by our hon. member, Mr. Abraham Wallis. They date from 1816 and refer to quarry marks only. They are precisely similar to those in use now. They are as follow:—

Robert Attwooll, Vernyeats Quarry	(4)
John Rod ,, ,,	(5)
William Attwooll ,, ,,	(6)
Edward Schollar, Tonge Quarry	(7)
Newman Thomas ,, ,,	(8)
Thomas Read, Dungeness (2)	(9)
Henry Hind, Green Hole (2)	(10)
John Pearce ,, ,, ,,	(11)
Jonathan Sweet ,, ,, ,,	(12)

At this time block stone was worth 22s. per ton.

I may here explain that a merchantable block of Portland stone is usually inscribed with 4 marks—1st, the quarry owner's trade mark; 2nd, the number of the block; 3rd, the quarry mark; 4th,

the contents of the block in cubic feet, 16 of which go to the ton. On rare occasions a 5th mark is added to indicate the bed from which the block was taken. Thus (13) would mean Whitbed, (14) Basebed.

Some of the principal quarry owners now use marks as follows: —Weston (15), Pearce (16), Barnes (17), R. Giles and Co. (18), Steward and Co. (19).

The quarry marks indicating the precise spot whence the stone was taken are of course much more numerous. Each quarry is worked as a rule by four men and a boy. Some of their marks now, or recently in use, are these; the name being that of the foreman:—

S. Stone, Independent Quarry		(20)
R. Pearce,	,, ,,	(21)
J. A. Stone,	,, ,,	(22)
T. Rod, Barleycroft	,,	(23)
W. Flew, Mutton Cove	,,	(24)
J. Comben, Trade	,,	(25)
W. Otter, Weston	,,	(13)
J. Hodder,	,, ,,	(26)
J. G. Pearce	,, ,,	(27)
A. W. Otter	,, ,,	(28)
J. Elliott,	,, ,,	(29)

and so on.

The capacity of the block is expressed in modified Roman numerals, indicating cubic feet. A fraction less than one-half is not counted.

Thus (30) means 3 cubic feet, (31) 3½ ditto, (32) 5 ditto, (33) 5½ ditto, (34) 10 ditto, (35) 10½ ditto, (36) 15 ditto, (37) 20 ditto, (38) 40 ditto, and so on.

All these marks, with the exception of the contents mark and block number, which are painted on by the foreman (usually in red), are cut on the block with a chisel at the quarry. The measuring is done with a two or three foot rule made of a thin strip of iron and marked in inches and three inches, thus (1).

According to Mr. Wallis, however, these measures are not the normal or statute feet and inches. He informs me by letter that "the proper length of a three-foot rule for Portland stone is really 3ft. 0¾in. A quarter of an inch on the foot is generally allowed, but the rule is sometimes longer, because by cutting the strokes the iron is lengthened. The quarrymen like to have the rule a little longer, so that the stone shall hold the measure after it has been squared with the tool. If the stone did not hold its thickness at one side by one inch it would make 1⅔ cubic feet difference in the size of a block 4ft. × 5ft. × 3ft. 3in. Moreover all the blocks are measured one inch longer than they are called. This extra inch was in former times allowed for jack-holes that they were obliged to make in turning the stone about before the 'crane' was introduced."

A block completely marked would look something like this (2).

The explanation is this: the block belongs to Giles and Co., as quarry owners. It comes from H. Otter's quarry (Whitbed), contains 29ft. 6in. cube or 1 ton, 13ft. 6in., and the number of the block is 222. I am indebted for this drawing and other information to Mr. Stroud, of Weymouth and Dorchester, so far as concerns Portland stone.

Through the intermediacy of Mr. Jas. Andrews, of Swanage, I have been favoured with an able and interesting account of the marks used in the Purbeck quarries and compiled by Mr. F. A. Burt, a considerable quarry owner and a member of our Field Club.

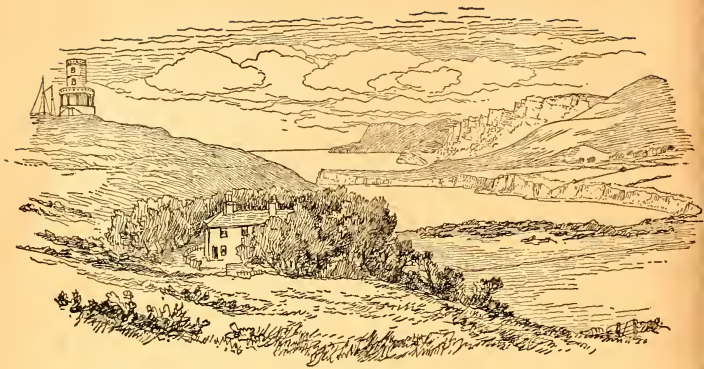
Blocks of stone not being obtainable in Purbeck, the cubic contents are not required. The marks therefore have reference to superficial feet in the case of "flag," and "pecks" in the case of "sinks." It is interesting to note that the notation is identical with that in use at Portland, so that I need not describe it in detail. Mr. Burt is unable to explain what sort of "pecks" the quarrymen mean. The term seems to be used in a conventional sense only. They allege that the custom was followed by their fathers and grandfathers before them. The peculiarity is this, that in order to get at the so-called capacity, the sink is measured on

the outside for length and width, and on the inside for depth. As an illustration, a "sink" superficially 3ft. 2in. by 1ft. 4in. and 4in. in depth would be reckoned as of 6 peck dimensions. Purbeck "curb" and "steps" are sold by the *foot run* and are not marked. They are measured with a line or cord which, when new, contains about 25ft., but as it shrinks or stretches with wet or dry weather, it is usually measured or tested every time it is used. It might at times be many inches or even a foot longer or shorter than it should be, thus introducing serious errors in commercial transactions. The rule used for this testing, as well as for measuring all kinds of stone as to breadth and depth at or from the quarries, is a piece of wood 24ins. long, $1\frac{3}{4}$ins. wide, and $\frac{3}{4}$in. thick. It is marked at every inch with a cut or notch, and at every 3ins. with holes burnt in—in much the same way in fact as the iron rule in use at Portland, except that the middle mark is not F but (39).

This rule is made by the mason or quarrier, and is called the "stick of inches" (40). Mr. W. M. Hardy informs me that it is also called a "tuvvot," *i.e.*, two foot, and that it has an evil reputation owing to its being used across the backs of loitering boys "gone too long after father's dinner, or stopping about when sent after the donkey."

Purbeck marble being a more valuable commodity is sold at per foot cube *or* per ton. It is marked as the stone is, but, owing to its greater density, only 12 cubic feet would go to the ton. Purbeck stone is reckoned at 14 cubic feet per ton. The trade in this favourite marble, unsurpassed for quiet effectiveness, dates back to very early times; many, if not most, of our Abbey Churches and Cathedrals containing abundance of it.

Finally, I am indebted to Mr. Hardy for rubbings of marks found on certain ancient stones when restoring Studland Church. They apparently have nothing to with measurement, but are mason's marks indicating the position the particular stone was to occupy in the building. This is their figure (3), and they are placed on the bottom of the stone. Similar marks have also been observed at Wimborne Minster and on stones of 17th century date elsewhere.



KIMMERIDGE BAY.
CLAVELL'S TOWER, COASTGUARD STATION.

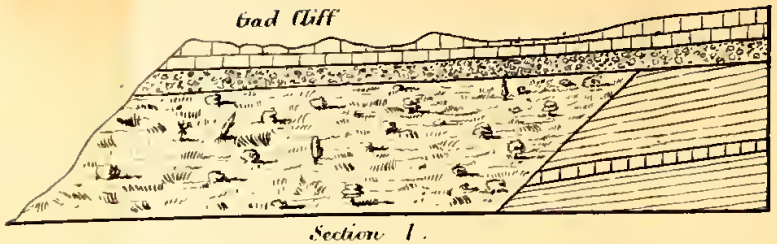
Kimmeridge Shale.

By J. C. MANSEL-PLEYDELL, Esq., F.G.S., F.L.S.

THE Kimmeridge Clay derives its name from the village of Kimmeridge, in the Isle of Purbeck. The formation extends from St. Alban's Head to Gadcliff; both of these headlands consist of Portland stone, Portland Sands, and Kimmeridge Clay at the base, and constitute the range of hill which terminates at Gadcliff on the west. The junction of the Portland Sands with the Kimmeridge Clay is well shown throughout the whole distance by a series of parallel launchets on the scarp of the hill. The Shales* upon which the Sands rest are well exposed on the

* Kimmeridge Shale, its origin, history, and uses by Burton Gear, pp. 22, 1886.

Sections in the Kimmeridge Clay from Gad Cliff (west) to Kimmeridge Bay (east).



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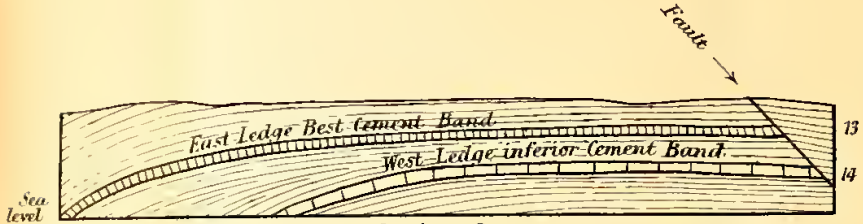

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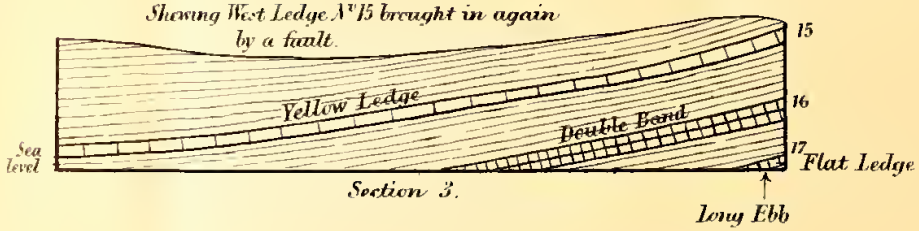

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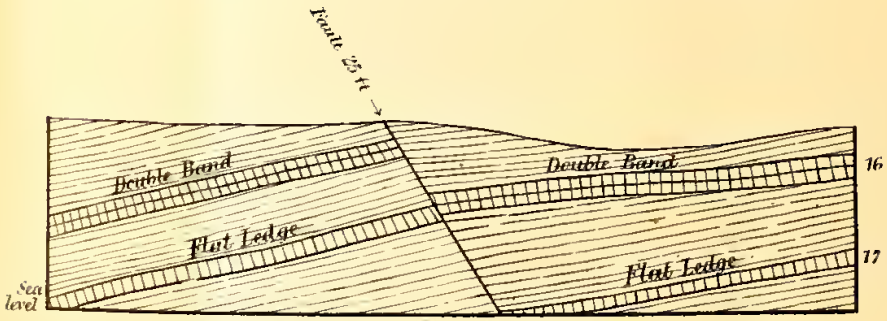
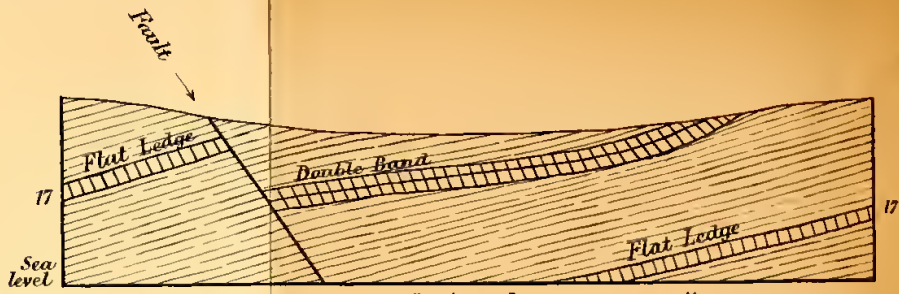


Section 4.
from Long Ebb towards Broad Bench



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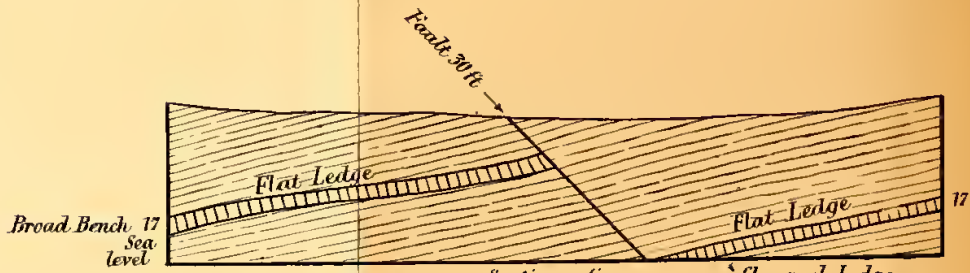

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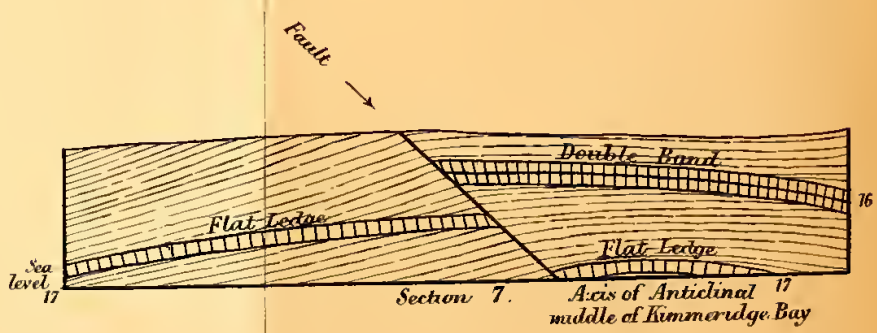

Section 7.

coast-line, the cliffs averaging a height of about 190 feet. They consist of bituminous clays and dirt-beds, intercalated by 20 tabular layers of argillaceous limestones. At St. Alban's Head, which is its most westerly extension, the series is more than 600 feet thick. It appears on the opposite side of the Channel at Boulogne, testifying to the continuity of England with France. It is probable the Shales derive their bitumen from the Saurians, and the myriads of molluscs whose remains are compressed in the laminated, paper-shales, and other fossiliferous beds of the series. Between St. Alban's Head and Chapman's Pool the beds are much disturbed and partly covered over; on its western side 20 beds rise from the shore in succession. Soon after the two first show themselves a fault throws them down out of sight. They soon appear again followed by ten others in succession, each separated by a clay-bed. The Kimmeridge Coal consists of two beds, one locally called Blackstone (2 feet thick), the other Bubbicum (fifteen inches thick), succeeded by Nos. 13 and 14, which rise from the shore when Nos. 1, 2, 3, and 4 have reached the top of the cliff. These re-appear on the west of the anticlinal and dip into the sea near Gadcliff. Nos. 15, 16, 17 rise from the shore within a distance of 250 yards. No. 16 is intercalated by a thin band of indurated schiste about 1 inch thick, giving it the appearance of a double band. There are several downward faults which in some cases send the beds below the sea-level, but only to re-appear and commence again their slow ascent; in other cases a bed is brought down to the level of a lower one, giving the appearance that both belong to the same. At Tower Hill, on the eastern flank of Kimmeridge Bay, the beds are thrown down some hundred feet. Nos. 16 and 17 are the first to appear on the western side of Kimmeridge Bay, and run parallel to the shore-line a considerable distance. No. 17, which through three downward faults forms the three dangerous ledges of Charnell, Broad-Bench, and Long-Ebb, is locally called Flat Ledge.

It is probable the Shales were laid down in deep water beyond the limits of an estuary of a large river, which carried down the

spoils of the land through which it passed, including trunks of trees, limbs, leaves, seeds, and other vegetable and animal remains; the heaviest would be the first to sink, the lightest would be carried farthest out to sea, and after undergoing chemical changes by the agency of the sulphate of lime in the sea-water would become incorporated with the muddy deposit.

LOCAL NAMES OF BEDS WHICH HAVE MORE OR LESS SOME ECONOMIC VALUE.

No.			
10	White Lias		
11	Shaky Ledge		
12	Grey Ledge		
	Blackstone	Kimmeridge Coal	
	Bubbicum		
13	East Ledge	Cement Beds	Limestone
14	West Ledge		
15	Yellow Ledge		
16	Whale's-back		
17	Flat Ledge		

The frequent occurrence of lathe-made discs of Kimmeridge Shale, found in the neighbourhood and in other parts of the county in connection with ancient interments, as late as the period of the Roman occupation, indicates that in those early days the Shales had some value in the estimation of the people living in those days; but there is no record of the Shale having been employed for economic purposes until towards the end of the 16th century, when Lord Mountjoy erected a manufactory for the extraction of alum from the Shale, which from some unrecorded cause was abandoned. Sir William Clavell, who was the owner and Lord of the Manor, took on the works and used the Blackstone to heat the furnace. The Blackstone crops out at Cuddle-hill on the east side of Kimmeridge Bay where are a number of depressions and refuse-heaps, the sites of adits and shafts in connection with those early works. The system of mining them must have been attended with difficulties, for instead of working the shafts up the inclines of the strata to avoid the flooding

of the waters they worked down, which incurred frequent swampings and the necessity of making fresh adits, the evidences of which are on all parts of the hill.

Sir William carried on the works with success, but disaster overtook him just as everything looked most hopeful, when they were seized under the plea that they were an infringement upon a Royal Patent. Nothing daunted, Sir William converted them into a manufactory of glass and salt ; he constructed a massive stone-pier to facilitate the removal of the products. This was probably after the year 1613, as he offered his "glass-works" to the King, which he described as consisting of 40 pans, capable of yielding 500 tons of alum annually, and he undertook to erect a pier at his own expense, of which the remains were seen at low tide only 50 years ago. All traces of it are now obliterated and a modern quay occupies the site. All preliminary arrangements were terminated by the action of Sir Robert Mansel, who possessed a Royal Patent which he maintained was infringed upon by Sir William Clavell. When the case was heard before the Privy Council Sir William Clavell was sentenced to imprisonment in the Marshalsea Prison and the confiscation of the works. The following is a copy of a petition from Sir William Clavell to the Privy Council (reign James I.).

"To the Right Honorables the Lords of His Majesty's Privy Council, the humble petition of Sir William Clavell showing that there being a difference between your petitioner and Sir Robert Mansel, Knight upon a Patent granted by the late King's Majesty touching the making of glass, your petitioner about two years past was, upon complaint of the said Sir Robert Mansel, called before your Lordships at this honorable Board touching the same, where your petitioner received this seizure by your Lordships. That his glass-houses and furnaces, built by the consent and allowance of Sir Robert Mansel, should be razed and utterly demolished, to your petitioner's great loss and prejudice, and that your petitioner's glass brought to London should be seized and delivered to the said Sir Robert Mansel, and that your petitioner should be imprisoned in the prison of the Marshalsea, all which was fulfilled upon your Lordships' petitioner, according to his great grief and disgrace. That, notwithstanding the said Sir Robert Mansel bearing further malice

to your petitioner, was not with all this satisfied, but shortly after commenced suit against your petitioner in His Majesty's Court of Exchequer, upon the same pretences, and for the same matters hereby your Lordships formerly settled and adjudged on by his Bill there exhibited and ready to be showed to your Lordships may now plainly appear, that after a year's suit and full hearing a determination of the cause in the said Court of Exchequer, the said Sir Robert Mansel upon further purpose to weary and threaten your petitioner renewed his said suit for the said cause in the same court where yet there still dependeth to your petitioner's extreme charge. That herewith not contented the said Sir Robert Mansel hath since commenced likewise suits in His Majesty's Court of King's Bench against your petitioner, for the very same matters here also complained of and hath endeavoured to get your petitioner arrested thereupon. Now your petitioner being in continual vexation by the restless courses of the said Sir Robert Mansel, it is humbly prayed that your Lordships would be pleased either to dismiss from this Honorable Board and to repair your petitioner for the punishment and prejudice he hath undergone already in the performance of your Lordships' said seizure and to leave your petitioner to take his course by the ordinary proceedings of the laws of this kingdom (which is allowed to all His Majesty's lawful subjects) against the said Sir Robert Mansel, as the said Sir Robert Mansel hath done against your petitioner, or else to take such course as in your Lordships' wisdom shall be thought most fit to confine the said Sir Robert Mansel to be bound by the order of this most Honorable Board to which this petitioner hath always (and now will) most willingly submit, which request the petitioner hopeth will be most consonant and agreeable to justice, and for this, your Lordships' favour, the petitioner will now pray for your Lordships," &c. This was not granted him until 1635.

These Shales have been long known from a very early period to be good fertilizers. A writer in *The Gentleman's Magazine* for the year 1768 mentions the benefit some clay-ground derived from the application of the ashes of Kimmeridge Shale from the Isle of Portland, and in an article by Dr. Meyer in the *Geological Transactions* for 1811 he speaks of it in similar laudatory terms as have other later writers done.

More than 40 years ago a party of chemists and engineers, under the conviction that the Shales of Kimmeridge were of considerable commercial value, formed the "Bituminous Shale Company,"

commencing with a capital of £25,000, and having obtained a lease of the cliffs, they erected at Weymouth retorts and other appliances for the manufactory of varnish, paint, lubricating grease, pitch, naphtha, and paraffin. The shale was subjected to destructive distillation, and after the volatile products had been driven off, an average of about 10 per cent. was left as residuum. The retorts were then emptied and the coke thrown into ovens to prevent volatilization of the ammonia. The ammoniacal liquor and the tar were then mixed with the coke, and a manure was produced equal, it was said, to Ichabod Guano.

It was not long before an action was commenced against the company for an infringement on Young's Patent. On the hearing of the case Vice-Chancellor Stuart ruled that the manufacture of offensively smelling and unmarketable oils could not be held to be an anticipation of Young's process. During the trial there was an attempt to identify Kimmeridge Shale with coal, but as it was not an element in the trial the question was not argued.

The company carried on the works with every appearance of success, but, owing to the capital of the money being locked up, and an indictment for a nuisance being preferred against it at this crisis, added probably to defects in the process adopted, the affairs were wound up on the 7th March, 1854.

The property then passed into the hands of Messrs. Ferguson and Muschamp, and the works were removed from Weymouth to Wareham with the object of developing the manurial value of the shale. To attain this 1cwt. of sulphuric acid and 3cwt. of water were added to a ton of residuum taken from the retorts, instead of the tar and ammoniacal liquor, and the distillation was effected at a low temperature, by which the destruction of the organic matter which impregnated the shale was avoided. A quantity of manure produced under this treatment was sold at the rate of £4 a ton. Testimonials came in on all sides speaking favourably of the superior quality of the manure, especially in its prevention of the wire-worm, grub, and larvæ.

The following is the analysis of the manure, by M. Duquesne, a Belgian chemist :—

Soluble Bonephosphate	·39
Carbon	48·12
Vegetable Matter	12·56
Hydrogen	7·09
Organic Sulphate of Lime	5·08
Charred Animal Matter	4·85
Silica	4·59
Sulphate of Lime	4·22
Essence of Naphtha	3·51
Soda	3·11
Organic Nitrogen	2·95
Potash	2·07
Phosphate of Lime	1·37
Arsenic	·09
	100·

Messrs. Ferguson and Muschamp's process preserved the valuable volatile products. A ton of shale produced 7½ gallons of naphtha, 10 gallons of illuminating oil, 12 gallons of lubricating oil, 120lb. of pitch, 11½cwt. of coke, and a small quantity of pure white paraffin wax. The pitch yielded an excellent varnish, remarkable for its durability and brilliancy, which was adopted by the Board of Admiralty. Through an insufficiency of capital and other causes the company was obliged to wind up, and the works were suspended for some time, when they fell into the hands of Mr. Wantostrocht, who formed a company, under the presidency of the Duke of Malakoff (Marshal Pelissier), of Crimean celebrity, whom, on the occasion of his visit to inspect the works, my father, an old Peninsular officer, invited to Smedmore. He had not met a French Marshal since the battle of Salamanca, at which he had a horse shot under him.

The new company fitted up the works with the most modern and complete machinery, and devoted special attention to the distillation of oil. At the same time they contracted to light Paris with gas. About 50 tons of oil and 500 tons of manure were

manufactured per month, and the gas was utilised to heat the furnaces and light the works. 1,149 tons of the shale were exported to Australia, New York, Boston, Brussels, and Dieppe, 1,170 the following year. A light iron jetty, designed by Mr. Evan Hopkins, was erected in the year 1859, and a massive stone pier was commenced near the one erected by Sir William Clavell some 250 years before.

The following is an account of the process of distillation :—The retorts were charged with about 5cwt. of shale previously broken into pieces, 2in. square, and the temperature maintained as nearly uniform as possible. The crude oil stood in tanks for 48 hours to let the ammonia water subside, and then passed into a still. The first product was a light oil making over proof 75° ; the second was a heavier oil containing paraffin.

Dr. Ure gives a more detailed account of these oily products obtained by distillation at a low temperature. No. 1, an offensively smelling dark-brown oil, suspended in an aqueous liquid, charged with sulphuret hydrogen, carbonic acid, and ammonia ; on being distilled with water and purified it furnishes an oily liquid. No. 2 when purified gives out the odour of the finest varieties of coal-gas and naphtha, and is a mixture of several chemical substances ; when heated with concentrated nitric-acid this oily liquid is divided into two portions, one of which (No. 3) is dissolved by the acid, while the other (No. 4), being insoluble, floats on the surface of the solution as a light colourless oily liquid, resembling in its general character the hydro-carbons of Boghead tar, and of petroleum. No. 3 when mixed with water furnishes a dense heavy yellowish oil with the odour of nitro-benzole. When sufficiently purified it is applicable for all the purposes for which benzole is employed—namely, for dissolving India-rubber and gutta-percha, for removing stains from fabrics, preparing varnishes, and making artificial oil of almonds, &c. The tar-like residuum distilled without water at rather a high temperature, gives off other volatile products. The first portion thus obtained is amber-coloured, possessing an offensive sulphurous

smell which, however, is lost on exposure to the air, when the oil becomes darker. This oil is acted on by sulphuric, nitric, and hydrochloric acids, especially by the first. The remaining portion of the oil, when washed with water and afterwards distilled with steam, furnishes a perfectly colourless oil with the properties of paraffin. This last, which forms but a small portion of the original oil, behaves in all respects like the paraffin oil obtained from Boghead Cannel, and is applicable to lubrication and all the other uses of that liquid.

The following is an analysis of the Kimmeridge Blackstone by Dr. Hoffman, of the Royal School of Mines :—

Coke	43·0	Mineral Matter	23·5
		Carbon	19·5
Oily and Solid Volatile Products	39·0	Light Oil (Naphtha)	2·3
		Heavy Oil containing 1·9 per cent. of Paraffin	36·7
Gas, Water, &c.	18·0	Gas, Water, Ammonia, &c....	18·0
	100·0		100·0

And of the Kimmeridge Shale (which is of an inferior quality) Dr. Hoffman's analysis runs thus :—

Coke	71·5	Insoluble residue	34·1
		Carbon	15·0
		Hydrogen	2·4
Oily and Solid Volatile Products	14·6	Naphtha	2·7
		Heavy Oil containing 1·3 per cent. of Paraffin	29·5
		Pitch	2·4
Gas, Water, &c.	13·9	Gas, Water, &c.	13·9
	100·0		100·0

Mr. Patterson, of Warrington Gas Works, in his report dated June, 1876, says —"The fossilized oil constitutes the chief value of the shale, and I cannot but think that it may be used in a satisfactory and profitable way in the manufacture of paraffin-oil and other products incident to its distillation. The result of several processes of this kind conducted at a temperature of about

900° Fh. yielded per ton an average of 67·25 gallons of crude oil, 11·00 gallons liquor containing 6 per cent. of ammonia, equal to 2·75 ounce liquor per gallon, and from 1,118 to 1,187lb. of coke. The latter containing sufficient carbon to work off the shale for oil purposes." And adds : "The crude oil contains some 20 per cent. of naphtha and 3 per cent. of paraffin."

Another analyst, Dr. Gesner, says the Blackstone yields 50 gallons of oil per ton containing 9 per cent. of tar of a specific gravity ·910, and that the oil contains a greater number of the equivalents of carbon than those derived from coals or bitumen.

The company getting into difficulties was dissolved in 1872, and in 1876 a new company was formed to utilise the coke and the residue from the *destructive distillation* as sanitary and purifying agents under the distinctive name of Sanitary Carbon, possessing deodorising, decolorising, and antiseptic properties similar to those of animal-charcoal and far superior to the coke of ordinary bitumen.

The value of carbon produced from Bituminous Shale, as comparable with that of animal charcoal, has long been known, for we find in *Muspratt* (under Boneblack, p. 342) the following :—

Substitutes for Bone Charcoal.—Of the subsitutes which have been proposed for bone charcoal . . . the *best known* is that obtained from Bituminous Shale. This mineral is constituted, like bone, of an earthy and organic constituent, and yields a *similar Charcoal.*

But it is added—

The *rare occurrence* of the substance places it beyond the reach of most manufacturers.

While shales generally have either a vegetable or mineral origin, that of *Blackstone* contains fossilised organic remains, and as carbon is the only ingredient in animal-charcoal which possesses any antiseptic and kindred properties, and the Blackstone yields a preponderating amount of carbon, the value of it in a sanitary point of view was supposed to be very great.

It should be taken into consideration that animal-charcoal contains only 10 per cent. of carbon, *Sanitary Carbon* contains, as shown in Dr. Ure's Dictionary, 72·8 per cent., and by M. Duquesne 48·12 per cent. of carbon, and 21·84 per cent. of other allied filtering media, or a total of 70·06 per cent.

The efficacy of this material, when applied to the purification of sewage, has been conclusively demonstrated, not only by experiments, but also by actual practical use.

Among the experiments may be mentioned one conducted by the proprietors, when a mixture of raw London sewage, drainage waters from Cornish tin, iron, and clay-mines, and indigo, cerise, green, and purple dyes, was filtered through the sanitary carbon, and at the present time, some three years after the experiment, the purified liquid is quite transparent and bright ; and another by H. C. Bartlett, Esq., Ph.D., F.C.S., who says :-- "The decolorising power of this Char is very conspicuous in removing the colouring matter of almost every dye including every present solution of the aniline dyes. . . . . I have now a sample of urinous slops which was taken more than two months back in a condition of putrid decomposition. It was filtered once through a small quantity of the sanitary carbon, by which means all putrescent smell was immediately removed, and since then, although exposed to a temperature at which decomposition is most active, no further decomposition has taken place and the sample remains entirely free from smell."

To this purpose of filtration of sewage water, the sanitary carbon is exactly suited ; it combines properties not met with in any other filtering medium, arrests mechanically any objectionable matters held in suspension, and chemically retains within itself the valuable products which have hitherto been allowed to run to waste, to the pollution of the rivers and watercourses of the country, and the endangerment of the public health.

COMPARATIVE TABLE OF THE VALUE OF THE ILLUMINATING MATTERS CONTAINED IN SOME OF THE GAS COALS AND CANNELS USUALLY EMPLOYED FOR GAS MANUFACTURE IN ENGLAND.

Name of Coal.	Purified Gas per Ton of Coal in cubic feet.	Illuminating power of Gas in Sperm Candles of 120 grains.	Weight of Coke in lb. nett.	Comparative Value of Illuminating Matter.
Dukinfield Cannel	11,250	22·5	1,520	253·72
West Yorkshire Coal and Iron Company's Cannel	10,330	21·3	1,350	247·09
Bartonlisher	9,398	25·32	1,272	237·95
Allanton	10,561	22·32	1,272	235·72
Merryton	10,105	22·59	1,288	228·27
BLACKSTONE	11,300	20·	817	226·
Duke of Bridgewater's Cannel (screened)	10,190	20·3	1,460	206·85
West Pelaw Main	9,500	15·	1,568	142·5
Waldridge	10,000	14·2	1,530	142·
New Pelton (average)	9,911	13·5	...	133·89
West Pelaw Main	9,800	13·5	...	132·5
Towneley Main	9,100	14·	1,523	127·4

The Blackstone has an advantage over common coal in requiring half the time only in the production of an equal amount of gas, and consequently a considerable economy of fuel. The supply at Kimmeridge is inexhaustible, and the position of the beds favourable for working. Science has shown the value of these shales, the volatile matter of the best bed (Blackstone) being 73 per cent., leaving 27 only solid matter. Their capacity for the production of valuable oils and other ingredients must remain undeveloped until a system of deodorization has been discovered in the chemist's laboratory, and until then every attempt to bring the shale into a marketable condition must as hitherto end in disappointment.

On some of the Rarer Trees in the Gardens of Abbotsbury Castle.

Read before the Members August 17th, 1893.

By J. C. MANSEL-PLEYDELL, Esq., F.G.S., F.L.S.

I have selected a few of the rarer trees which grow here and traced the history of their origin from very ancient periods. Several Earls of Ilchester have in succession placed their inherited love of nature, especially that which relates to floriculture and arboriculture, in developing the natural resources of the soil and situation of this favoured spot.

These Gardens are protected on all sides by sheltering hills, on the north by the range surmounted by Abbotsbury Castle Rings, on the south and west by St. Catherine's and Linton Hills, which ward off the south-west gales so fatal to trees and shrubs on our coasts. In addition the Gulf Stream lends its aid to maintain a flora comparable to that of the Western Piviera. The height and size of many of the trees show the care, thoughtful selection, and scientific knowledge the Earls of Ilchester have bestowed for so long a period upon the Gardens, by which they have attained their present perfection.

Passing over the earliest forms of vegetable life exhibited in Cellular Cryptogams, Algæ, Lichens, Fungi, I shall mention incidentally the three chief divisions—Vascular Cryptogams, (Ferns, Equisetaceæ Lycopodiaceæ); Gymnospermeæ, seeds naked (Coniferæ, Cycadeæ, Gnetaceæ); Angiospermæ, seeds contained in a receptacle, Monocotyledons, having one seed-leaf or cotyledon, and Dicotyledons having two seed-leaves, with a pith and true separable bark and growing by concentric zones. The Conifers appeared for the first time in the Carboniferous age. In the succeeding ages, from the Permian to the Tertiary, they increased largely both in genera and species. There was a marvellous and energetic impulse at the beginning of the Cretaceous age, which brought about the introduction of the monocotyledonous and dicotyledonous plants, which have since developed into the different genera and species which now cover the face of the earth. During the lengthened duration of the Tertiary period the world underwent great climatic changes owing to extensive accessions of land and diminution of sea. The union of continents and the extinction of vast inland lakes in Asia, Africa, and Europe, by upheavals of mountain chains and the elevation of land had considerable influence upon the temperature of the globe. These modifications were not accomplished all at once, but gradually, affording time for those plants which were sufficiently hardy to submit to these changes. During the early Tertiary period (*Eocene*) the climate continued tropical, or at least sub-tropical. In Dorsetshire and the South of England, France, and Northern Italy, are found remains of Palms, both fan-shaped, and pinnate-leaved forms, seeds of Nipa, a plant now only met with in the salt-marshes of the coasts and islands of the Indian Seas and the Philippines, Aralias, and Oaks allied to some now growing in the tropics. The numerous plant relics from the London Clay of the Isle of Sheppy equally attest to the tropical character of the flora of that age. Palms of that age can be traced through Northern Germany and Switzerland. Of the fossil plants which can be determined with any certainty, only a few belong to the southern hemisphere ; the rest have their living

representatives in the northern. Going from east to west the zone occupied by the northern forms reaches from Japan to Northern China, by Amour to Central Asia, Siberia, the Caspian, the north of Persia, Caucasus, Europe, the Atlantic and Pacific sides of North America, from Spitzbergen, Greenland, Alaska, to the Azores, Canaries, North Africa, Arabia, and the Malay Archipelago. Tropical forms, although not a majority, are met with in this extensive area, but only in isolated stations, separated widely from each other, leading to the supposition that they belong to an anterior homogeneous vegetation. The latest geographo-botanists, such as Engler and Drud, show this to be the case. The northern forms, which occur at the present day in high latitudes and on the tops of mountain-ranges, belonged, without doubt, to a flora which occupied vast regions extending to the mountain ranges of Central Germany, the glaciers of the Alps, the valleys of the Danube and the Rhine, and the plains of Lombardy. The Alpine and northern forms were thus able to spread and maintain themselves in many a favourable station, and with the retreat of the glaciers the hardiest plants re-occupied the homes they had abandoned, but some failed to do so, among them *Salisburia adiantoides*, of which we shall have to speak farther on. During the middle of the Tertiary age *(Miocene)* the flora of the world underwent further important transformations, bringing in the new forms, which now grow only in Asia, Africa, and America, but are extinct in Europe. It is from plants of this period we are able to trace some of the immediate ancestors of our living species. A large amount of fossil remains of the Abietaceæ Conifers are found in the later Eocene beds. The scales of the cones of Pinus have been found in Siberia and in the Himalaya, showing a previous connection with districts so widely separated. The Oligocene beds of the South of France contain *Pinaster*, *Pinea*, and *Strobus*. The flora of this period is remarkable for its richness and variety of species, in contrast to North America, which shows a great poverty especially of Monocotyledons. The Palms had entirely disappeared from Europe. A Dracæna, allied to *D. Draco*, which now grows in the Canaries and in Western

Africa, flourished in the Oligocene beds of the South of France, but is now lost. The Canaries is its most northern limit. The remains of Dicotyledons comprise *Alder*, *Birch*, Cupuliferæ (*Hazel*, *Hornbeam*, *Beech*, *Chestnut*, *Oak*), Salicaceæ (*Willow*, *Poplar*), Ulmaceæ (*Elm*, *Plane*), *Fig*, *Laurel*, *Maple*, Araliaceæ (*Aralia*, *Ivy*), *Myrtle*, *Box*, *Water-Lily*, *Judas-tree*, *Carob-tree*, Oleaceæ (*Olive*, *Ash*), *Catalpa*, *Viburnum*, &c.

Salisburia *syn* Gingko.

The Taxineæ, whose seeds are not collected round the axis of a cone, made their appearance before the true conifers. There are six families belonging to the Order, of which Salisburia is one. Its leaves are coriaceous, fan-shaped, and deciduous. It differs so much in habit and foliage from all other conifers that in the absence of flowers and seeds it would be almost impossible to assign its proper place in the Vegetable Kingdom. The male-flowers are on slender axillary catkins, the female are fascicled and pedunculate, The trunk lacks the regularity of the Pine or the Araucaria ; it is less upright, the branches divaricate, spreading, not verticillate. but irregular upon the axis. Passing over *Gingkophyllum flabellatum*, Sap. from the English Coal measures and *G. Grassata*, Sap. from the Permian as doubtful progenitors of *Salisburia adiantifolia*, undoubted forms of the genus appeared for the first time in the Permian age, followed by *G. primigenia*, Heer. and *G. antarctica*, Sap. in the Rhætic and twelve species in the Oolites of Great Britain, Siberia, Spitzbergen, Southern Russia, Amour, and Japan. The Spitzbergen-beds contain a flora similar to that of Scarborough, Gingko has been met with in both. The Wealden yields one species, the Lower Cretaceous Beds of the Polar regions and Northern Germany yield at least four, of which *G. tenuistriata* occurs in the Lower Greensand of the two widely-separated districts of Greenland and Portugal. The Eocene *Gingko eocenica* and the Miocene *G. adiantoides* of Greenland and Italy come very near to *Salisburia adiantifolia*. Mr. Starkie Gardner found seeds in the London Clay of Sheppy, which he considers to be those of *G. eocenica* and identifies

G. adiantoides in the basalts of Ardtun Head, Isle of Mull. It is found in Greenland, Italy, and in the Saghalien Islands, and entirely disappeared from Europe in the Upper Miocene age. The genus once so widely spread and indigenous in Europe, and which commenced its southward migration from the Polar regions as long back as in the Eocene age, is now reduced to one species in the far East, and owes its preservation to the agency of man. It is capable of sustaining the ordinary temperature of Europe, as we see here in these gardens. It flowers and seeds in the Botanical Gardens of Montpellier, and can live at Copenhagen, Lat. 55° 41′ N., where the mean temperature is about 46° Fah. It attains a height from 60 to 70 feet. The small leaf-bearing twigs are thick, deciduous, and tubercled, bearing a tuft of four or five closely-packed, stalked leaves. The fruit is a one-seeded drupe with an outer fleshy covering. The Gingkos of the Jurassic age bore persistent leaves.

Taxodium.

Flowers monœcious, branches slender, clothed with linear deciduous leaves arranged in two rows, some of the branchlets fall in the autumn. The Genus first appeared in the Arctic regions in the later Cretaceous age, which were then interspersed with large lakes fed by thermal calcareous, ferruginous springs. A considerable number of conifers were introduced into Europe during the Tertiary age in company with *beech*, *Liquidambar*, *Tulip-tree*, *Lime*, *Elm*, *Sassafras*, &c., which were subsequently distributed over the temperate zone, and formed vast forests. Europe was at that period broken up into islands. Taxodium has not varied much from its primordial type, and differs little from its living representatives, *Taxodium distichum* and *T. mucronatum*, both limited to N. America, the former to the Southern States, the latter to the mountainous districts of Mexico.

T. distichum can scarcely be distinguished from the early Oligocene and Miocene genus; hence Professor Heer named it *T. distichum—miocenicum*—and is one of the most widely distributed of Tertiary plants.

Sequoia.

Sequoia made its first appearance in the Wealden age and had its fullest development and widest distribution in the Cretaceous Beds. No less than 30 species have been met with between the Wealden and Miocene ages from the Polar regions to Nebraska, and in the South of France and Italy. It is now restricted to two species, both in a limited area of N. America. *S. sempervirens* end on the coast of California and *S. giganteam*, Terry (Wellingtonia), in the Sierra Nevada. The leaves are polymorphous, varying with the species; some are forked or falcate; others linear and straight. They differ so much in form and size that the early botanists considered branches from the same tree to belong to a different species. The male-cones are persistent, and at the summit of the lateral branches. In the living species the female cones are solitary; but in some of the fossil forms they are clustered.

The foliage of *S. sempervirens* is distichous, that of *S. gigantea* is spirally imbricated. The former, better known as *Red wood*, occupies a sandy ridge rising to a height of 2,000 feet in dense forests, 20 or 30 miles wide from the south of Santa Cruz to the southern border of Oregon. Professor Boland says its distribution depends upon the sandstones and oceanic fogs.

Count Saporta speaks of a forest composed of Sequoias in the Cretaceous beds of Patterfell in the Polar regions, carpeted with ferns and cycads. It is probable that the distichous and imbricated foliage was united in the same species in its earliest form. In the Tertiaries of Greenland *S. sempervirens* and *S. Langdorfi* are distichous. Sequoia is met with in the Eocene basalts of Mull, in the Miocenes of the Baltic, Switzerland, Germany, and Italy. It predominated in the later Eocene (Oligocene); afterwards it showed symptoms of decline and disappeared entirely with the exception of the two living species.

Araucaria.

Araucaria appeared for the first time in the Secondary age. It has been found in the Stonesfield States of Oxfordshire, and in the

Inferior Oolite of Bruton, in Somersetshire, in the Yorkshire Oolites, and the Wealden of England. It is dicœcious or rarely monœcious, cones terminal, leaves globular, coriaceous and spiral. *A. Goepperti* was found in the Eocene beds of Bournemouth by Mr. Starkie Gardner, associated with a rich flora comprising *Ferns*, *Smilaceæ*, and *Aroids*, from which he concludes that the Eocene bush-growth on the alluvial banks of the great Bournemouth river, and its probable extension along the coast of a submerged continent, must have been similar to that of the present day on the Brisbane river, and on the shores of Moreton Bay, on the east coast of Australia. The long embedded plants of our Eocene coasts seem to have risen up and to live again in these far distant regions, and through them we are able to picture the long sandy surf-beaten coasts, and fringed with *Araucarias*, *Gum trees*, *Palms*, and *Ferns* of the present pine-clad Bournemouth. It is a native of the southern hemisphere, trunk erect, branches horizontal and decumbent. *Araucaria imbricata* forms vast forests extending from the south of Chili to Brazil. *A. Brazilensii* has a similar distribution. Araucaria has not been found in the Cretaceous Beds except in New Zealand, where two species have been found in the coal-bearing beds of that formation.

There is a group of Australian species, all needle-leaved and of gigantic size, of which *A. excelsa* attains a height of 230 feet with a trunk 90 feet in circumference.

Cryptomeria.

Cryptomeria belongs to the Taxodineæ. It is represented by only one living species *C. Japonica*, a native of China and Japan, and can apparently be traced from *C. Sternbergii*, Gardn. found in the Eocene basaltic tufas of Ballypaladay and Glenarm in Antrim and Ardtun Head, Isle of Mull. It has close affinities both with *Taxodium* and *Sequoia*, at first it was relegated to *Araucaria*, afterwards to *Sequoia*. The attachment of the cones to the branches proves it to be a Cryptomeria. There is nothing to distinguish it, at least in appearance, from the Japanese type.

The flora, with which *C. Sternbergii*, is associated in the tufas of Antrim and Mull, bears a close resemblance to that of the Lower Cretaceous beds of Dakota, in North America. It is singular that this genus, which once grew and flourished in Dorsetshire, is at this moment restricted to a very limited area at the other extremity of the northern hemisphere. Varieties of *C. Japonica* have been produced by cultivation, of which many diverge from the original type.

PALM.

This is the first Monocotyledon we have had under observation to-day. The date of the earliest Palm is probably the period of the Chalk-marl, there are undoubted proofs of it in the European beds of that age, the two principal species are *Flabellaria chamæropifolia*, Goepp, with leaves resembling the living Chamærops, and *F. longirachis*, Ung., resembling *Phœnicophorium Sechellarum*, Wendl., a native of the Sechelles, inserted and cultivated in our Palm-houses. This primæval Palm is intermediate between the fan-shape and pinnate-leaved. During the Eocene Age a vegetation prevailed resembling that of Australia in the present day, when the Palms were as abundant as they are now. A Sabal occurs in the Eocene beds of Corfe Castle, a fragment of which is preserved in the County Museum. In the Oligocene age the Palms reached 54° N. lat., and in the Miocene Age the latitude of Greenland. The changes through which Europe and America passed during the whole of the Tertiary period sufficiently account for the extinction of some species and transformation of others. The northern limit of the Palm is now much farther south than it was at one time, the Sabal flourishes on the eastern and western sides of the northern hemisphere. Chamærops grows at Nice in 43° 41′ N. L. There are 10 or 12 species of this genus, most of them are dwarf, but a few attain a height of about 30 feet. Their range is very wide, extending to Northern Asia, Africa, America, and Southern Europe. The leaves are plaited like a fan, the petioles usually prickly ; the leaves of the Phœnix, of which the *Date-Palm* is a species, are pinnate ; *Chamærops humilis* is usually

dwarf, not more than 3 or 4 feet high, sending up numerous suckers, but if these are not allowed to grow, the tree will produce a trunk several feet high.

Aralia.

The Aralia belongs to a sub-order of the Umbellifloræ, differing from the Umbellifers in its seed, which is in the form of a berry or drupe. The family is a large one, with varied foliage and stems prickly or smooth. It first appeared in the Upper Cretaceous beds of North America, Greenland, Siberia, and sparingly in Europe. *A. formosa* occurs in Europe and in Colorado. The number of species increased during the Tertiary period, some of which extended as far east as the Himalaya. The Aralias are now restricted to the Eastern States of North America, New Zealand, Japan, and are chiefly tropical. The best known species is *A. spinosa* (which grows freely in these gardens). The four others which grow here are *A. Sieboldi*, with large coriaceous leaves, *A. Mandshuria*, *A. Chinensis*, and *A. pentaphylla*.

The Common Ivy belongs to this Order. Its first appearance was in the Upper Cretaceous beds of North America and Greenland. *Hedera primordialis*, Sap., of the same age differs little from the Irish Ivy, and *H. platanoides*, Lesq., from the Cretaceous beds of Kansas is found in the tufas of Denmark and of La Celle, South of France.

Juglans.

The Walnut family passed from the Upper Cretaceous, through the Tertiary, to the Quaternary Age. It has been found in the Upper Cretaceous beds of Greenland and Atane, and in the Tertiary beds of the polar circle. *J. arctica* from the Upper Cretaceous beds of Greenland is probably the ancestor of *J. nigra*, the Black Walnut now living in North America. The Walnut is no longer indigenous in Europe except in the mountainous districts of Greece. It extends from the Trans-Caucasus to the East Indies. *J. laciniata* is a variety of the Common Walnut, *J. regia*. The Miocene beds of Œningen have furnished *J. acuminata*, and the tufas of the South of France, *J. minor*.

Liquidambar.

This genus, which belongs to the order Saxifraginæ, made its first appearance in the Cretaceous age, *Liquidambar integrifolia*, Lesq., occurs in beds of that period at Nebraska and Kansas in North America and several species in the Tertiaries of Europe, notably *L. Goepperti* in the Lower Eocene of the Paris basin and *L. europæum* in the Oligocene and Upper Pliocene of Switzerland, from Bonn to Northern Italy, Silesia, Greenland, and in the Quaternary beds of Massa in Central Italy. During the Upper Tertiary age *Liquidambar* flourished on the declivities of the Pacific of North America, where it is now extinct. *L. europæum* has been mistaken for the Maple, but its alternate leaves readily distinguish it.

The Abbotsbury Liquidambar is *L. Styraciflluum*, *L.* The leaves change to a bright red, and afterwards remain on the tree some time.

Liriodendron.

Liriodendron belongs to the order Magnoliaceæ, and made its first appearance in the Lower Cretaceous beds of North America, Kansas, Nebraska, and Atan, in Greenland, the majority of the fossil species have been obtained from these beds, including *L. Meeckii*. *L. Procaccinii* closely resembles the living *L. tulipifera*, its geographical range is considerable (Sinigaglia, Eriz, Bilin, Iceland, and the Pliocene of Meximieux, France). The only other European Liriodendron is *L. Gardina* from the Eocene of Bournemouth. The Tertiaries of North America, Greenland excepted, have no fossils of this genus. According to Saporta the fossil-leaves of the Liriodendron found in Iceland belong to a species peculiar to the beds of that island he names it *L. islandicum*, Sap. et Marion. The characteristic shape of the leaf has not varied since its first appearance, with the exception only of slight variations; leaves entire or with simple or bipartite lobes; obtuse and acuminate leaves are often found on the same branch. *L. tulipifera*, the Tulip-tree, was considered to be the only living species. Saporta reports a Chinese

species in the Kew Herbarium with deeply-cut leaves. *L. tulipifera* inhabits the Atlantic declivities of North America from Florida to Canada.

There is clear proof that a material cooling of the Polar regions commenced towards the early part of the Cretaceous age, when many Dicotyledonous plants were introduced, the remains of which have been found so plentifully in North America and Greenland. These colder conditions caused a migration southward of those plants which were not hardy enough to maintain themselves in their original homes, or had not succumbed to the rigours of the climate. Many plants which once lived within the Polar Circle during the Cretaceous age, are not met with in the oldest beds of the Tertiaries of those regions; the English and Scotch Eocenes have yielded several, which bear a close relation to the Polar Cretaceous flora.

Report on Observations on the Appearances of Birds, Insects, &c., and the Flowering of Plants and Returns of Rainfall

In Dorset during 1893.

By NELSON M. RICHARDSON, B.A., F.E.S.

SINCE I wrote the 1893 Report the number of Members in the Club has increased considerably, and I am glad to find that there is a corresponding increase in the number of observers of Plants, Birds, and Insects. Nine have this year sent in their returns, as against seven last year, two of these being confined to birds and one to plants. The observers are the following :—J. C. Mansel-Pleydell, Whatcombe, near Blandford ; N. M. Richardson, Chickerell, near Weymouth ; E. R. Bankes, Corfe Castle ; Rev. O. P. Cambridge, Bloxworth ; H. J. Moule, Dorchester ; T. R. Atkinson, Sherborne ; Rev. W. J. Rowley, Woolland ; Colonel F. J. Stuart, Blandford ; J. Andrews, Swanage, the two last noting Birds only. The observers are designated in the lists by their initials.

Several rare birds have been observed in Dorset which it is convenient to notice here, though they hardly come strictly within the limits of this Report.

Baillon's Crake. Mr. Andrews sends me the following note :—"A rare bird *Baillon's Crake*—which Mr. Mansel Pleydell writing to the *Dorset County Chronicle* states is the first properly authenticated specimen found in this County—was captured in the stable of a builder's (Mr. Hardy's) yard at Swanage on June 1st, 1893. The bird was identified by Mr. Hart, of Christchurch, as follows :—"Distinguished from the *Little Crake* by its smaller sizes (scarcely 7in. in length), its olive legs and feet and the white outer web of the first primary." This bird is very nicely set up by Mr. Hart, and Mr. Andrews will be pleased to show it to anyone interested.

Merlin (J. C. M. P.). A Merlin seen at Verwood December 26th.

Siskin (J. C. M. P.). One washing itself in a pool on the roadside near Crawford Bridge.

Black Guillemot (J. C. M. P.). One picked up alive near the Industrial School, Milborne St. Andrew, on December 13th, driven inland about 16 miles by the storm of the previous day.

Golden Oriole (E. R. B.). One heard singing and seen in the garden at Langton Matravers Rectory, near Swanage, by the Rev. L. Lester May 9th.

Hoopoe (E. R. B.). One seen many times at Corfe Castle Rectory on April 7th.

Woodchat Shrike (E. R. B.). One seen at Corfe Castle by Rev. Owen L. Mansel on April 21st.

Short-eared Owl (E. R. B.). Shot near Lulworth Castle September 18th, a remarkably early date.

Iceland Gull *(Larus icelandicus)* (E. R. B.). Female, in winter plumage, shot in Poole Harbour by Mr. Gerald R. Peck, of Minterne Grange, Parkstone, on February 6th, 1893. Not previously recorded from Dorset.

Black-winged Stilt *(Himantopus candidus)* (E. R. B.). Charles Orchard, a well-known and experienced farmer of Wareham, declares that he observed and watched a large flock of this species in Worbarrow Bay, Purbeck, in the summer of 1893.

Variety of Chaffinch (T. R. A.). A nearly white female Chaffinch often seen near Sherborne.

Mr. Moule alludes to the migration of the Otter, which the water keeper at Dorchester tells him does not frequent the upper waters of the Frome until about Christmas.

Mr. E. R. Bankes sends the following note on the season :—

"1893 will long be memorable on account of its exceptionally high temperatures, the almost unparallelled duration of 'the great drought,' and the wonderful amount of sunshine recorded. It opened with a spell of severe frost, but this was succeeded by mild weather before the end of January. February was very mild with an almost unprecedented amount of rain. With March began the very warm and brilliant weather which made the year so remarkable and continued with very few interruptions till about the beginning of October. The last three months were unusually mild with very few frosts, but a considerable rainfall. December 12th will always be memorable on account of the terrific gale, the most severe and destructive within living memory, that swept over the county and did an incalculable amount of damage to houses, buildings of all sorts, ricks, trees, &c., almost wrecking a good many of the villages near the coast. It is worth mentioning that Christmas Day and the three following days were so wonderfully mild and summerlike that blackbirds, thrushes, and many other birds were in full song all day, while the woodpigeons were cooing loudly—even long before it was daylight. From an entomological point of view the year was most disappointing: numbers of good local species of Lepidoptera were either exceedingly scarce or could not be found at all, and an exceptionally large proportion of larvæ were stung by ichneumon flies. No rare or interesting species of butterflies or moths came over to us from the Continent as was the case with several kinds in 1892, but descendants of the "Clouded Yellows" *(C. edusa)* that then visited us were met with in moderate numbers in the autumn. On the other hand the 'Painted Lady' butterflies *(V. cardui)* that migrated to this country in goodly numbers at the same time had apparently to all intents and purposes failed to continue their race, for hardly a single specimen was observed during the whole year. The one redeeming feature was the fine weather, which was all that the collector wished and enabled him to meet with and secure all the species that were not 'conspicuous by their absence.' Wasps, aphides, and a small snow-white insect named *Aleurodes brassicæ* that attacks the cabbages, broccoli, and Brussels sprouts appeared in immense numbers and were very troublesome in the gardens."

Amongst the Birds may be noted—Swanage, March 13th, as early for the Wheatear, Corfe Castle, March 15th, as early for the Chiff-chaff, Corfe Castle, April 8th, for the Cuckoo, the same date as at Whatcombe last year. Corfe Castle and Bloxworth, April 3rd, for the Swallow is earlier than any date last year; in fact, the dates for most of the birds show a season of

earlier arrivals than in 1892. The forwardness of the season is also shown by several of the records of insects being earlier than those of 1892. The two hybernated butterflies on the list (Brimstone and Painted Lady) are 19 and 25 days earlier in leaving their winter quarters than in 1892, which testifies to the warmth of the early spring, whilst the appearance of a viper on February 7th confirms this, as do also the early dates of several Flowers. I append the following tables :—

FIRST APPEARANCE OF BIRDS IN DORSET IN 1893.

	J. C. M. P. Whatcombe.	N. M. R. Weymouth.	E. R. B. Corfe Castle.	O. P. C. Bloxworth.	F. J. S. Blandford.	T. R. A. Sherborne.	J. A. Swanage.
Flycatcher	May 10	May 6	May 7	..	Nov.19		
Fieldfare	Dec. 10	Dec. 31	Aug.26	..			
Blackbird	..	..	..	Feb. 2*			
Redwing..	Dec. 10	Dec. 31					
Nightingale	Ap. 10	..	Ap. 22*	Ap. 11*	Ap. 17		
Wheatear	Mar.30	Ap. 26	Ap. 1	..	Mar. 30	..	Mar. 13
Willow Wren	Ap. 7						
Chiff-Chaff	Ap. 3	Mar.23*	Mar.15*	Mar. 22	Mar. 29		
Whitethroat	Ap. 23	Ap. 9					
Skylark	..	Feb. 7*	..	..	..	Mar. 7*	
Rook							
Cuckoo	Ap. 13	Ap. 20*	Ap. 8*	Ap. 12*	Ap. 17		
Swallow	Ap. 9	Ap. 15	Ap. 3	Ap. 3	Ap. 10	Mar. 18	Ap. 4
Sandmartin	Ap. 10	..	Ap. 4				
Swift	Ap. 28	May 9	Ap. 30	..	May 1	May 5	
Nightjar..	Ap. 16	May 19*	May 11	Ap. 10			
Turtledove	Ap. 18	..	Ap. 20†				
Woodcock	Oct.	..	..	..	Oct. 20		
Corncrake	May 18	May 21*	Ap. 14	May 1			
Wryneck	..	..	Ap. 28				
Redbacked Shrike ..							
Redstart..							

* Song first heard. † Near Wareham. Wheatear at Swanage, March 13., E. R. B.

BLOXWORTH.—First rasping notes of *Parus major* (Great Tit), January 28. Chiff-Chaff's song, March 25.

BLANDFORD.—Swift last seen, August 11. A young unfledged Woodpigeon at Houghton, October 25.

CORFE CASTLE.—Woodcock and Fieldfare exceptionally scarce.

WHATCOMBE.—Blackbird, nesting, March 7 ; first egg, March 15 ; Skylark, nesting, April 5 ; several second broods, October 18. Swallow last seen, October 4. Woodcock last seen, March 9.

WEYMOUTH.—Chiff-Chaff last seen, October 10. Whitethroat last seen, October 13. Swallow last seen, October 31.

SWANAGE.—Swallows observed on November 24 and again on November 30, these dates being the latest recorded of any Swallows in England. See *Field*, December, 1893.

Earliest Dorset Records of Plants in Flower in 1893.

	J. C. M. P. Whatcombe.	N. M. R. Weymouth.	E. R. B. Corfe Castle.	O. P. C. Bloxworth.	H. J. M. Dorchester.	T. R. A. Sherborne.	W. J. R. Woolland.	W. J. R. Woolland.
Wood Anemone ..	Mar. 12	Mar. 18	Mar. 19	Mar. 13	Mar. 6	..	Mar. 16	
Lesser Celandine ..	Feb. 10	Mar. 2	Feb. 2	..	Feb. 7	Feb. 3	Feb. 8	
Marsh Marigold ..	Ap. 1	Mar. 31	Mar. 24	..	Ap. 6	Ap. 13	Mar. 16	
Dog Violet	Mar. 4	Mar. 18	..	Mar. 12	..	..	Mar. 13	
Greater Stitchwort ..	Mar. 25	..	Ap. 5	Ap. 4	Ap. 4	Mar. 24	Mar. 24	May 15*
Herb Robert	Ap. 20	Ap. 15	..	..	..	..	Ap. 3	May 23*
Horse Chestnut { Leaf ..	Ap. 10	..	Mar. 8	Mar. 6	Mar. 25	..		
Horse Chestnut { Flower	Ap. 24	Ap. 17	Ap. 16	..	Ap. 6	Ap. 23		
Bush Vetch	Ap. 9	May 18	Ap. 11	..	..	..	Mar. 30	May 4*
Blackthorn { Leaf ..	..	..	Mar. 10	..	..			
Blackthorn { Flower	Mar. 24	Mar. 18	Mar. 13	Mar. 12	Mar. 10	..	Mar. 10	May 22*
Hawthorn { Leaf ..	..	..	Mar. 9	..	Mar. 21			
Hawthorn { Flower	Ap. 21	Ap. 19	Ap. 17	Ap. 18	Ap. 20	Ap. 23	Ap. 7	May 15*
Ivy	Nov. 3	..	..	..	..	..	July 24	Oct. 3*
Dogwood { Leaf ..	..	..	Ap. 4					
Dogwood { Flower	May 20	May 18	..	..	..	..	May 7	
Elder .. { Leaf ..	Feb. 5	..	Jan. 31	..	Feb. 1			
Elder .. { Flower	Ap. 28	Ap. 28	May 8	..	May 10	..	Mar. 20	June27*
Wild Teasel { Leaf ..	Mar. 2							
Wild Teasel { Flower	May 29	July 15	..	..	June 26	..	June 22	
Devil's Bit	..	..	..	..	..	..	Aug. 11	
Knapweed	May 25	June 10	May 18	..	June 20	..	Ap. 25	July 10*
Field Thistle	..	Ap. 26	July 8					
Coltsfoot	Mar. 4	Mar. 18	..	Mar. 21	Feb. 1	Feb. 27	Feb. 13	
Yarrow	Aug. 5	June 20	June 14	..	..	..	July 7	
Ox-eye Daisy	Ap. 26	May 11	May 2	..	..	..	..	July 7*
Mouse-ear Hawkweed	May 26	May 18	..	..	..	..	May 18	
Harebell	July 11	..	June 8	..	..	..	July 17	
Greater Bindweed ..	Aug. 9	May 26	..	..	June 24	June 16	June 22	July 13*
Water Mint	Aug. 9	..	..	..	July 19	..	..	Aug. 4*
Ground Ivy { Leaf ..	Feb. 27							
Ground Ivy { Flower	Mar. 15	Mar. 24	Mar. 23	..	Ap. 4	..	Mar. 13	
Wych Elm { Leaf ..	..	..	Mar. 30	..	Ap. 12			
Wych Elm { Flower	Feb. 26	Feb. 25	Mar. 12					
Hazel .. { Leaf ..	..	..	Mar. 17					
Hazel .. { Flower	Jan. 27	Jan. 23	Jan. 28	..	..	..	Feb. 8	June13*
Cowslip	Mar. 18	Ap. 5	Mar. 15	Mar. 21	Ap. 6	..	Feb. 16	May 25*
Spotted Orchis { Leaf ..	..	..	..	Mar. 25				
Spotted Orchis { Flower	Ap. 19	Ap. 20	..	..	..	..	May 12	
Bluebell	Ap. 2	Ap. 9	Ap. 2.	..	Ap. 6	Ap. 7	Feb. 23	

* Ripe Fruit.

Dorchester.—Second blooms—Lesser Celandine, December 20 ; Dogwood, September 19, abundant ; Elder, September 19. In the South Walks some chestnut leaves were falling on June 19.

Sherborne.—Primrose in flower January 13. *Rosa arvensis* in flower May 3. Dog and Field Roses blooming again freely in the autumn. Hazel in full bloom again by October 1.

First Appearance of Insects, &c., in Dorset in 1893.

	J. C. M. P. Whatcombe.	N. M. R. Weymouth.	E. R. B. Corfe Castle.	O. P. C. Bloxworth.	H. J. M. Dorchester.	T. R. A. Sherborne.
Rose Beetle	..	..	May 3			
Cockchafer	May 6	May 5	May 8	May 1		
Bloody-nose Beetle	Ap. 1					
Glow-worm	..	July 1	June 15	..	..	June 15
Common Hive Bee, h. ..	Mar. 2	Mar. 4	..	Feb. 5	Mar. 23	
Wasp (*Vespa vulgaris*), h. ..	Mar 25	Mar. 4‡	Feb. 7‡	Mar. 31		
Large Garden White Butterfly	Ap. 1	Mar. 29	Ap. 20			
Small ,, ,, ,,	Ap. 1	Mar. 28	Mar. 29	Mar. 24	Mar. 23	
Orange Tip Butterfly ..	Ap. 2	Ap. 24	Ap. 20	Ap. 2		Ap. 10
Meadow Brown Butterfly ..	May 25	June 8				
Wall Butterfly	..	Ap. 22	Ap. 19			
Brimstone Butterfly h. ..	Mar. 15	..	Mar. 4	Mar. 2		
Painted Lady Butterfly, h...	Mar. 7	*	*			
Cinnabar Moth						
Currant Moth..	..	June 25				
Viper	Feb. 7	Ap. 1	May 9			
Frog Spawn	Feb. 10	Ap. 18				

* Scarce. † In fair numbers. ‡ Abundant. h. Hybernated.

Whatcombe.—Young Viper, 3in. long, April 29. My keeper shot 8 adders rolled in a knot on a sunny spot in Clenston Wood, February 9, J C. M. P.

Dorchester.—A specimen of the Small Garden White Butterfly *indoors* on March 19.

Purbeck.—Meadow Brown Butterfly at Gadcliff, May 31 ; Kimmeridge, June 2, E. R. B.

Sherborne.—Wood White and Red Admiral Butterflies and Humming Bird Moth all plentiful, and several Clouded Yellow Butterflies caught.

Viper, 3¼in. long, killed near Weymouth, J. R. A.

Hamworthy.—Mr. J. M. Henderson notices the abundance of Moths and Butterflies, especially Clouded Yellows.

REPORT ON RAINFALL IN 1893.

I have this year received reports of Rainfall from 36 stations, all Dorset with the exception of two just over the Wilts border and one just over the Devon border, which are useful for comparison. Three of the stations reported from in 1892, viz.: TARRANT KEYNSTON (G. Galpin), BLOXWORTH HOUSE (Colonel Cambridge), and POOLE (J. H. Phillips) are unrepresented; while on the other hand there are seven additions, some of which are especially welcome, as filling up gaps where no observations have before been recorded. Sherborne, Puddletown, Winfrith, &c., still remain the centres of large districts in which the rainfall is unobserved. The additional stations are HOLWELL (Mrs. Warry), HORTON (Rev. Geo. Wellington), SWANAGE (F. A. Burt), ROUSDON (C. E. Peek), CONEYGAR HILL, BRIDPORT (H. Gordon), WEST BAY ROAD, BRIDPORT (H. Gordon), and WINTERBOURNE STEEPLETON (H. Stilwell).

The highest record of Rainfall is, as usual, from HAZELBURY BRYAN, almost exactly the same quantity as in 1892, 37·42in. Canon Wheeler writes me: "I have two gauges, one in a somewhat high part of the garden, the other about 200 yards away. They never record exactly the same quantity. When I had to investigate for the elaborate reports of the Tyneside Field Club the returns from many stations in Northumberland and Durham, the same fact often struck me. How it can be accounted for is somewhat difficult to say." The next highest record is, as in 1892, from CHEDDINGTON, 34·60in., against 31·99in. in that year. After this come MELBURY, RUSHMORE, CATTISTOCK, and LARMER, all about 32in., STEEPLETON, 30·81in., WHATCOMBE, 29·57in., PARKSTONE, BEAMINSTER, CREECH GRANGE, and CORFE CASTLE, all about 28in., BLOXWORTH (Rectory) which stood 4th on the 1892 list being this year only 14th with 27·05in., whereas PARKSTONE, which is this year 9th, was in 1892 24th. The smallest Rainfall was at SMEDMORE, 20·20in., which had the lowest record in 1892. Then follow PORTLAND, 20·33in., WEYMOUTH, 22·73in., HAMWORTHY, 23·34in., SWANAGE, 23·46in.

The table below gives the record for 1893 in inches (omitting the decimal portion), showing the distribution of rain over the 36 stations and the number of stations recording similar amounts.

Amount in Inches.	20	22	23	24	25	26	27	28	29	30	32	34	39
No. of Stations.	2	1	2	9	5	3	2	4	1	1	4	1	1

It will be noticed that the difference of 1·90in. in 1892 between WYKE REGIS (Mrs. Pretor) and WEYMOUTH (R. Met. Soc.) is very nearly maintained this year, Mrs. Pretor's record being 1·75in. above the WEYMOUTH one. This tends to show that the difference is due to some permanent cause. In five months out of the twelve WEYMOUTH has the larger record, whilst the great differences between the two occur in October and December, and amount to 1·16in. and ·55in. respectively, which bring up the WYKE REGIS record so much above that of WEYMOUTH.

STEEPLETON, which is divided from PORTISHAM by the hills on which Hardy's monument stands and is barely three miles distant, shews a record of 5·48in. more than PORTISHAM. This hardly comes up to the difference of 12·85in. between HAZELBURY BRYAN and HOLWELL, five miles away, but is nevertheless very striking.

I have placed a few of the more interesting differences in the records of neighbouring stations in the form of a table as below.

Higher Record.	Lower Record.	Approximate Dist. apart in Miles.	Difference in Records in Inches.
Swanage (Andrews)	Swanage (Pix) ...	near	·01
Swanage (Andrews)	Swanage (Burt) ...	near	1·26
Rushmore	Larmer	1	·37
Parkstone	Poole (West St.) ...	1	4·34
Wyke Regis	Weymouth... ...	2	1·75
Steepleton	Portisham	3	5·48
Cheddington... ...	Beaminster ...	3	6·25
Corfe Castle	Smedmore... ...	3	7·26
Creech Grange ...	Smedmore... ...	3	7·36
Hazel. Bryan ...	Stur. Newton ...	5	12·14
Hazel. Bryan ...	Holwell	5	12·85

The gauges of Messrs. Andrews and Pix at Swanage continue to agree to within ·01in. as in 1892, that of the former being still that small amount ahead of the latter.

No. of Wet Days. The greatest number of days with a fall of ·01in. or more recorded was 164 at Gillingham, other high records being Beaminster, 163; Cheddington, 162; Cattistock, 161. The lowest are Smedmore, 69; Creech Grange, 95; Melbury, 108; Hamworthy, 111; Bloxworth, 113. Strange to say at Swanage Mr. Pix records 139 against 122 only from Mr. Andrews in spite of the agreement of the annual totals of the gauges. Wyke Regis receives more rain than Weymouth, but it falls in 132 days instead of 142.

Wettest Month. Towards the N.E. of the County the wettest month was as a rule February, the next July, with October closely following; but in other parts there seems to have been less rain in February, making July generally the wettest and October next. The full record is, Wettest month, July at 19 stations; February at 13; October at 4. Second Wettest Month, October at 18 stations; July at 7; February at 6; and December at 4.

Highest Monthly Records.—The two highest records are, as might have been expected, at Hazelbury Bryan; 7·18in. for February and 6·65 for December. April was the driest month except at two stations (August at Smedmore and March at Portland), and the amount recorded for April was nil at Holwell and did not exceed ·10in. at 15 others. March and May were also very dry and also August, especially on the South Coast stations (under 1in. at 15 stations).

Heavy Rainfalls.—July. The most general fall of over 1in. which has occurred this year, is recorded for July 15th, but took place probably at most stations on July 16th and is by some observers recorded for that date. As the same fall is doubtless referred to, I will make but one table to show the distribution, giving the station and the fall in 24 hours in inches.

0	Rushmore	·67	Gillingham	·72	Stur. Newton	·90	Whatcombe	1·18	Hazel, Pryan	1·50	Lytchett M.	1·43	Poole	1·50	Hamworthy	1·56	Wareham	1·06	Corfe Castle	1·68	Swanage (B)	1·77	Swanage (P) *	1·94	Swanage (A)	1·70	Smedmore (16th)	1·62	Portland	1·95	Wyke Regis (16th)	1·28	Melbury	1·27	Cattistock	1·23	Steepleton	1·17	Portisham	1·48	Cheddington	1·05	Beaminster	1·32	Bridport (P)	1·24	Bridport (C)	1·33	Rousdon

* Recorded for July 13 probably by mistake.

The heaviest fall appears to have taken place at WYKE REGIS and along the coast to the Eastward; to the North and West it diminished until it had decreased to ·67in. and ·72in. at GILLINGHAM and STURMINSTER NEWTON. At RUSHMORE there is no record of rain on the 15th, though on the 14th and 16th more than ·6in. fell on each day. At CHALBURY 1·08in. fell on the 11th, and Mr. R. H. Barnes records 1·43in. and three other falls of over 1in. during the month.

Mr. Andrews, of SWANAGE, says that the fall of 1·84in. on July 15th (St. Swithin's Day) was the heaviest fall recorded there in 13 years. As superstitions come within the limit of subjects discussed by the Club, it may have some slight weight with those who still believe that it will rain for 40 days after a wet St. Swithin's Day, to note that even when St. Swithin's Day was the wettest in the year, of the 40 succeeding days at CHEDDINGTON, only 18 days, at WHATCOMBE 14 days, at SWANAGE 11 days, had any rain; but a fine St. Swithin's Day at RUSHMORE produced only 26 fine days and at LARMER only 24 fine days out of the succeeding 40. This may be a little affected by the fact that a day of rainfall is, or should be, measured (for the sake of convenience and uniformity) from 9 A.M. on one day to 9 A.M. on the next, and does not therefore exactly correspond with St. Swithin's Day, which would begin at midnight, but the evidence is strong nevertheless!

SEPTEMBER.—On the 8th a fall of 1·01in. is recorded from SHAFTESBURY, but nothing over 1in. from elsewhere during this month, except a fall of 1·15in. at MELBURY on the 28th.

October.—The most extensive heavy storm of the year, with the exception of that on July 15th, took place on October 7th. I append, as in July, a table to shew the distribution and the fall in inches.

In a few cases the record is for October 6th or 8th.

·72	Gillingham	1·22	Stur. Newton (8th)	1·14	Shaftesbury	1·39	Rushmore (8th)	1·23	Larmer (8th)	1·48	Hazel. Bryan	1·09	Whatcombe	·79	Hamworthy	·92	Chalbury (6th)	·96	Wareham	·98	Corfe Castle	·84	Swanage (A)	·83	Swanage (B)	·76	Swanage (P)	1·17	Portland	·84	Wyke Regis (8th)	·85	Steepleton (6th)	·97	Cheddington	·69	Beaminster	·66	Bridport (C & P)

In this storm the condition of things was rather reversed from that of July 15th, and the S. stations (except Portland) received less than the N.E., Hazelbury Bryan and Rushmore having the greatest falls.

On October 17th there was another storm of less magnitude, some of the falls noted being as follows:—Lytchett Minster, 1·06in.; Poole, ·81in.; Hamworthy, ·79in.; Whatcombe, ·87in.; Swanage, ·65in.; Smedmore, ·60in.; Portisham, ·97in.; Rushmore, ·04in.

December.—At nearly all the stations the 19th (or in a few cases the 20th) is mentioned as the day of greatest fall in this month, though as a rule the amount is less than 1in. I subjoin a table as before, and I think that it is instructive to compare the falls at the various stations.

·65	Gillingham	·90	Stur. Newton	1·10	Rushmore (20th)	1·07	Larmer (20th)	1·66	Hazel. Bryan	1·25	Melbury (20th)	1·25	Cattistock	1·18	Cheddington	·86	Beaminster	·81	Bridport (P)	·69	Rousdon	·68	Chalbury	·92	Whatcombe	·96	Poole	·90	Hamworthy	·80	Lytchett M.	·75	Wareham	·70	Corfe Castle	·76	Smedmore (20th)	·65	Swanage (A)	·55	Swanage (P)	·55	Swanage (B)	·40	Portland	·66	Wyke Regis (20th)

This fall is interesting on account of the long maximum line stretching from S. to N.E., viâ Cheddington, Cattistock, Melbury, Hazelbury Bryan, and Rushmore.

February. A fall of 1·15in. occurred at Hazelbury Bryan on the 20th of this month.

Prolonged Drought. This drought, which took place in March, April, and May, had a most serious effect upon the grass and other crops, making the produce very small.

Mr. Barnes (Parkstone) says "March; only five days rain and none after the 16th. April; very dry, no rain at all till the 23rd, the absolute drought thus lasting 37 days. May; no rainfall till the 14th and only a little on that day and the 15th, a partial drought having lasted 76 days, viz., from 1st March to 15th May, during which only 0·60in. fell."

Mr. Andrews (Swanage) says: From February 28th to June 23rd, or nearly four months, only 0·99in. fell; there were two long periods of total drought, viz., 37 days (March 17th to April 23rd), and 35 days (May 19th to June 23rd).

Rev. G. H. Billington (Chalbury) says: "In only two of the last 28 years have we had less Rainfall, viz., in 1870, 23·85in. on 124 days, and in 1887, 22·46in. on 125 days," his total being 24·04in. in 138 days.

At Wareham the fall (25·18in.) was the lowest for ten years except that of 1887 (20·88in.).

At Cheddington it was lower in 1892, 1889, and 1887.

Mr. C. E. Peek (Rousdon) says that the Rainfall for 1893 (26·52in.) was 5·81in. below the average. It was a dry year, but less so than in 1887 (25·33in.) and 1892 (25·75in.). The Rainfall of March, April, May, and June amounted to only 1·99in., or 7·67in. less than the average. The occurrence of four consecutive months with a Rainfall of less than 1in. each is almost unique in this country.

I give Mr. Peek's report on the gale of December 12th, which was most destructive in its effects in most, if not all, parts of Dorset, and which is noted by several observers.

Report for December, 1893, Rousdon.

Wind.—The wind movement amounted to 12,467 miles, which was 302 miles below the average. The greatest movement in one

day was 794 miles on the 13th, and the least 120 miles on the 6th; while the daily average was 402 miles. On the morning of the 10th a fresh southerly wind reached a movement of 50, 60, and 70 miles per hour, at 9, 10, and 11 A.M. respectively. On the 12th a strong gale from the S.S.W. set in, and the movement rapidly increased from 48 miles an hour at 10 A.M. to 79 miles an hour at 2 P.M., and by 3 P.M. it had fallen to 51 miles. This gale seems to have reached its greatest force about 1 P.M., when the wind came in terrific gusts which must have been very nearly 100 miles per hour. In the town of Lyme Regis several houses were unroofed, chimneys were blown down, and much glass broken by the falling slates and tiles. The hourly movement of 79 miles has only been exceeded once during ten years' observations, viz., on November 1st, 1887, when a movement of 83 miles an hour was registered at 7 A.M., and for six consecutive hours on that morning the velocity was over 60 miles per hour. South-westerly and north-westerly winds were most prevalent.

Amongst other observers Mr. Mansel-Pleydell (Whatcombe) says "The great storm of December 12th fell with terrific and disastrous force here."

Mr. O. Farrer (Binnegar), says "Violent gale on December 12th acquiring very destructive force about two P.M., fortunately soon lessening, Aneroid fell then to 29in."

Mr. R. H. Barnes (Parkstone), alludes to "The destructive storm of almost hurricane force on the 12th and the great variations in the height of the barometer, the extremes being 28·54in. and 30·74in., and these occurring within nine days of each other, the 20th and 29th."

The notes on temperature and barometer which have been sent to me are as follows:—Rev. H. Pix (Swanage): Greatest cold 18° on January 2nd. Rev. G. H. Billington (Chalbury): Shade temperature highest 84° on June 19th and 20th; lowest 19° on January 2nd and 3rd. Barometer readings at 9 A.M., highest 30·74in. on December 30th; lowest 28·80in. on February 1st, but 28·60in. at 2 P.M. on December 20th.

Rev. O. P. Cambridge (Bloxworth) : The three hottest days were June 15th, 16th, and 17th when the thermometer stood at 117°, 120°, and 129° in the sun, and 88°, 89°, and 89° in the shade.

Mr. H. Stilwell (Steepleton) sends the following table of Meteorological Records, observed at Steepleton Manor, near Dorchester, during the year 1893 :—

Month.	Temperature.									
	Extremes recorded of						Averages for the Month of			
	Highest readings	Date.	Lowest readings.	Date.	Lowest on Grass.	Date.	Highest.	Lowest.	Lowest on Grass.	Daily Mean Temperature.
	°		°		°		°	°	°	°
January ..	51·3	23	13·2	3	6·6	3	41·2	29·4	26·1	35·5
February..	53·0	3	25·4	6	19 5	6	46·9	35·3	33·1	41·1
March ..	63·8	30	22·0	19	17·2	19	54·6	33·4	28·6	43·7
April ..	75·6	21	21·8	14	17·2	14	63·0	37·6	31·6	49·7
May ..	72·5	5	36·5	12	27·3	7	64·7	44·0	37·3	53·7
June ..	84·9	18	35·2	1	31·0	1	70·1	48·5	43·6	58·5
July ..	80·0	2	45·0	1	38·6	1	68·4	52·8	47·6	60·1
August ..	81·0	16	41·3	29	32·4	29	70·5	52·2	45·8	60 8
September	74·0	14	33·7	22	25·0	22	64·7	46·5	38·4	55·2
October ..	63·6	9	27·5	31	16·6	31	57·4	42·8	35·4	49·9
November	60·2	3	21·4	1	13·0	1	47·7	35·4	30·7	42·1
December	54·0	13	20·4	31	11·8	30	46·8	34 4	27·5	40·8
For the year	84·9	June 18	13·2	Jan 3	6·6	Jan 3	58·0	41·2	35·5	49·3

The following table is extracted from an elaborate one received from Mr. R. H. Barnes (Parkstone) :—

Month.	Mean of Maxima.	Mean of Minima.	Mean Temperature.	Highest Maxima.	Lowest Minima.	Min. on grass.		Mean relative humidity.	Mean amount of cloud.
						Mean.	Lowest		
	°	°	°	°	°	°	°		
January.. ..	41·3	31·6	36·6	51·7	16·8	23·3	5·3	86	7·6
February ..	48·2	37·0	42·6	53·9	28·7	28·6	16.5	84	7·6
March	55·9	37·5	46·4	65·4	27·4	26·0	15·2	74	4·8
April	65·2	41·5	52 8	77·0	31·1	31·1	17 4	60	2·8
May	67·9	46 4	56·5	74·7	39·3	36·7	26·2	66	5·8
June	71·8	51·1	60·7	87·9	40·4	41·8	27·5	65	4 4
July	70·7	54·4	62·0	81·2	50·6	47 8	41·1	75	6·8
August	73·4	54·3	63·3	84·6	44·3	45·3	32·8	71	5·9
September ..	67·4	47·8	57·1	76·6	35·8	38·2	24·9	71	6·4
October.. ..	59·2	44 1	51·4	65·8	30·3	35·4	16·7	82	6·6
November ..	47·7	36·3	42·0	61·5	27·2	28·8	14·9	84	7·1
December ..	47·0	34·2	40·9	55·0	20·5	23·1	10·0	88	6·3

Note.—Relative humidity is reckoned from 0 or absolute dryness to 100 or complete saturation. The mean relative humidity is the mean of that at 3 P.M. and of the mean of those at 9 A.M. and 9 P.M. It must be remembered that in fine bright

weather there is often (particularly in spring and autumn) heavy dew morning and evening, the humidity being as great or nearly so as if there were rain and fog.

The amount of cloud is reckoned from 0 when the sky is cloudless to 10 when the sky is quite covered, and the mean is found as above. It may be remarked that it is less cloudy on the average from 9 P.M. to about 11 P.M. than at any other time of the day.

For the years 1882-1893 inclusive the mean temperatures of July and August are exactly the same 60°·1 and the highest, and the mean temperature of January 39°·1 is the lowest; but the mean of the minima in March, 33°·7 is the lowest; April is the driest and least cloudy month with mean rainfall 1·64in., mean relative humidity 72, and mean amount of cloud 6·0.

In conclusion I have to thank those members and other observers who have sent me their returns of Rainfall. I shall be much obliged if they will kindly do the same with regard to the year 1894. I received a few daily records of rainfall, but nearly all are on Mr. Symons' small forms, which, if accompanied by additional notes on any heavy falls of 1in. or more in 24 hours, and any other matters of special interest, are for the purposes of this report nearly as good as a daily record. I think that there is a little variation in the time of day at which the record is taken by different observers. This should be 9 A.M. always, and the amount of rain then found in the gauge should be credited to the previous day. Thus a heavy storm at 7 to 8 A.M. on July 16th would be included in the return for July 15th. This rule should be carefully adhered to for the sake of uniformity.

I would strongly urge, in accordance with Mr. Symons' recommendation, that every gauge should be provided with a receiver capable of holding at least 6in. of rainfall. If the receiver is too small, the gauge overflows, the returns for the year are rendered inaccurate, and the particulars of an unusually heavy fall lost.

A table of the Rainfall is given on the following pages :—

Rainfall Returns for Dorset during 1893.

Name of Observer.	Station.	Height above sea level in feet.	Total depth of Rain in inches in 1893.	No. of days on which ·01in. or more fell.	Monthly depth of Rain in inches in 1893.											
					Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
N. Bond.. ..	Creech Grange	200	28·10	95	2·55	4·43	·20	·10	·69	·95	5·54	1·21	2·45	5·16	2·21	2·61
L. W. Pike ..	Corfe Castle (Furzebrook)	147	28·00	144	2·53	4·63	·32	·12	·72	·94	5·01	1·39	2·24	4·97	2·07	3·06
Col. Mansel ..	Smedmore	130	20·20	69	1·58	3·25	·65	·05	·59	·83	3·84	·40	1·79	2·13	1·09	2·99
F. A. Burt ..	Swanage	65	23·46	126	2·18	3·34	·22	·10	·63	1·03	5·39	·94	1·51	4·02	1·53	2·57
Rev. H. Pix ..	Swanage	60	24·71	139	2·15	3·38	·25	·14	·66	1·08	5·43	·89	1·86	4·13	1·74	3·00
J. Andrews ..	Swanage (The Bank)	8	24·72	122	2·19	3·42	·23	·12	·64	1·09	5·48	·87	1·76	4·09	1·73	3·10
C. E. Peek ..	Rousdon Observatory (Devon)	516	26·52	156	2·96	3·65	·28	·24	·83	·64	5·51	1·24	2·23	2·83	2·35	3·76
Rev. A. A. Leonard	Beaminster Vicarage	216	28·35	163	3·02	5·10	·35	·11	·97	·85	4·36	1·80	1·73	3·36	2·41	4·29
Miss Creed ..	Cheddington (Beaminster)	604	34·60	162	3·92	6·01	·62	·08	1·31	·82	5·68	1·87	2·15	3·84	2·93	5·37
H. Gordon ..	Bridport (Coneygar hill)	110	25·51	132	2·48	4·23	·39	·11	·83	·65	4·56	1·14	1·79	3·87	2·32	3·14
H. Gordon ..	Bridport (Portville, WestBayRd.)	10	26·41	132	2·71	4·30	·36	·11	·84	·73	5·16	1·13	1·99	3·69	1·89	3·50
R. Rintoul ..	Melbury House	about 500	32·51	108	2·89	5·59	·49	·08	·97	1·44	5·28	1·75	2·52	3·54	2·48	5·48
H. H. Palairet..	Cattistock Lodge	350	32·40	161	3·53	6·08	·48	·08	1·00	·89	5·37	1·22	2·06	3·86	2·51	5·32
H. Stilwell ..	Winterborne Steepleton	316	30·81	151	2·85	5·25	·36	·19	1·11	·80	5·36	1·43	2·16	4·91	2·25	4·14
W. Symes ..	Portisham	260	25·33	141	2·93	3·58	·36	·13	·94	·77	4·66	1·03	1·74	4·07	1·76	3·36
Rev. O. H. Gosset	Langton Herring	158	24·06	..	2·04	3·66	·32	·15	1·13	·59	4·48	1·01	2·04	4·05	1·55	3·04
Mrs. Pretor ..	Wyke Regis (Weymouth)	80	24·48	132	2·13	3·82	·71	·15	·90	·66	4·93	·85	1·84	4·30	1·31	2·88
Royal Met. Soc. (J. R. Eyles)	Weymouth	79	22·73	142	2·59	3·98	·41	·16	·93	·74	4·69	·63	1·83	3·14	1·30	2·33
Rev. W. R. Waugh	Portland (Chesil)	10	20·33	130	1·95	3·29	·23	·24	·81	·43	4·52	·85	1·39	3·79	·83	2·00

Rainfall Returns for Dorset during 1893—(continued).

Name of Observer.	Station.	Height above sea level in feet.	Total depth of Rain in inches in 1893.	No. of days on which ·01in. or more fell.	Monthly depth of Rain in inches in 1893.											
					Jan.	Feb.	Mar.	April.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
E. H. Stephens	Gillingham	244	27·90	164	2·25	4·07	·54	·16	·95	2·12	3·20	2·44	2·66	3·66	2·16	3·69
T. Ackland ..	Shaftesbury	722	25·47	144	2·47	4·06	·56	·09	1·04	1·08	3·84	1·46	3·34	3·50	2·02	2·01
Gen. Pitt Rivers	Larmer (Wilts)	500	32·02	155	2·67	5·40	1·14	·12	1·36	1·15	4·14	1·42	3·15	4·62	2·34	4·51
Gen. Pitt Rivers	Rushmore (Wilts)	500	32·49	154	2·59	5·20	1·02	·12	1·21	1·14	4·54	1·49	3·38	4·98	2·30	4·52
A. R. Hallett ..	Sturminster Newton (Riverside)	200	25·28	127	2·39	4·69	·46	·09	·91	1·40	3·12	1·20	1·61	3·95	1·81	3·65
Mrs. Warry ..	Holwell (Sherborne)	..	24·57	..	1·10	4·92	·14		1.30	1·33	3·36	1·41	2·00	3·46	2·19	3·36
Rev. Canon Wheeler	Hazelbury Bryan Rectory	305	37·42	157	3·50	7·18	·42	·12	1·73	2·44	3·38	1·39	2·51	5·41	2·69	6·65
Rev. S. H. Billington	Chalbury (Wimborne)	338	24·04	138	1·75	4·05	·28	·05	·83	1·11	4·08	·92	1·92	4·07	1·99	2·99
Rev. Geo. Wellington	Horton (Wimborne)	..	24·81	..	1·84	4·49	·40	·05	·91	1·03	4·01	·86	1·76	4·11	1·82	3·53
J. C. Mansel Pleydell	Whatcombe	270	29·57	146	2·72	5·64	·48	·08	·91	1·31	4·11	1·05	2·41	4·88	2·01	3·97
R. H. Barnes ..	Parkstone	198	28·79	..	2·12	3·99	·49	·03	·83	2·01	6·59	1·00	1·65	5·03	1·89	3·16
F. Styring ..	Lytchett Minster (The Yarrells)	60	24·76	135	1·38	3·90	·67	·03	·69	1·07	4·53	·71	1·82	5·48	1·47	3·01
F. Styring ..	Poole (West Street)	6	24·45	142	2·03	3·56	·33	·04	·67	1·09	4·55	·98	1·65	4·25	1·57	2·83
J. M. Henderson	Hamworthy (Bellevue)	12	23·34	111	1·98	3·14	·68	·07	·62	1·44	4·41	·81	1·79	4·43	1·31	2·66
Rev. O. P. Cambridge	Bloxworth Rectory	203	27·05	113	2·32	4·02	·88	·07	·71	·87	4·37	·84	1·78	5·45	2·09	3·65
S. W. Bennett..	Wareham (Castle Gardens)	18	25·18	146	2·08	3·91	·30	·13	·84	·84	4·75	·89	2·35	4·40	1·73	2·96
O. C. Farrer ..	Binnegar Hall (Wareham)	60	26·02	..	2·54	4·69	·26	·12	·73	1·12	4·48	·68	2·10	4·85	1·48	2·97